PART 70 OPERATING PERMIT
OFFICE OF AIR MANAGEMENT

Knauf Fiber Glass GmbH
240 Elizabeth Street
Shelbyville, Indiana 46176

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 and 326 IAC 2-1-3.2 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Operation Permit No.: T145-6038-00001	
Issued by: Janet G. McCabe, Assistant Commissioner Office of Air Management	Issuance Date:

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SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

The Permittee owns and operates a stationary wool fiberglass insulation manufacturer.

Responsible Official:	Robert Kranz
Source Address:	240 Elizabeth Street, Shelbyville, IN 46176
Mailing Address:	240 Elizabeth Street, Shelbyville, IN 46176
SIC Code:	3296
County Location:	Shelby
County Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Permit Program Major Source, under PSD

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source consists of the following emission units and pollution control devices:

(a) One (1) electrically heated glass melting furnace, identified as Unit ID # FURN 601, installed in 1978, exhausting through ID # 1-1;

(b) One (1) fiberglass manufacturing line consisting of forming, curing, and cooling sections, identified as Unit ID # MFG 601, installed in 1978, operating at a rated heat input capacity of 30 million (MM) British thermal units (Btu) per hour, combusting natural gas, utilizing one (1) wet electrostatic precipitator for particulate control, and two (2) natural gas fired thermal oxidizers with a rated combined heat input capacity of 36 MMBtu per hour, exhausting through one (1) stack ID #1-2;

(c) One (1) gas-fired (with electric boost) glass melting furnace, identified as Unit ID # FURN 602, installed in 1983, operating at a rated heat input capacity of 30 MMBtu per hour, combusting natural gas, utilizing one (1) dry electrostatic precipitator for particulate control, exhausting through one (1) stack ID #2-1;

(d) One (1) fiberglass manufacturing line consisting of forming, curing, and cooling sections, identified as Unit ID # MFG 602, installed in 1983, operating at a rated heat input capacity of 40 MMBtu per hour, combusting natural gas, utilizing one (1) wet electrostatic precipitator for particulate control, and one (1) natural gas fired afterburner with a rated combined heat input capacity of 30 MMBtu per hour, exhausting through one (1) stack ID #2-2;

(e) One (1) electrically heated glass melting furnace, identified as Unit ID # FURN 603, installed in 1978, exhausting through one (1) stack ID #3-1;

(f) One (1) fiberglass manufacturing line consisting of forming section, identified as Unit ID # MFG 603, installed in 1978, operating at a rated heat input capacity of 15 million (MM) British thermal units (Btu) per hour, combusting natural gas, utilizing two (2) wet scrubbers for particulate control, exhausting through one (1) stack ID #-3-2;

(g) One (1) natural gas-fired glass melting furnace, identified as Unit ID # FURN 605, installed in 1983, operating at a rated heat input capacity of 10 MMBtu per hour, exhausting through one (1) stack ID #5-1; and

(h) One (1) fiberglass manufacturing line consisting of forming, curing, and cooling sections, identified as Unit ID # MFG 605, installed in 1983, operating at a rated heat input capacity of 20 MMBtu per hour, combusting natural gas, exhausting through four (4) stacks ID #5-2, 5-3, 5-4, and 5-5.

(i) Nine (9) fiberglass pipe insulation production lines consisting of nine (9) natural gas fired curing ovens, identified as Unit ID # LINE 3001 - 3009, respectively, each with a maximum heat input capacity of 5 MMBtu per hour, each exhausting through two (2) stacks ID # 7-2 and 7-3, 8-2 and 8-3, 9-2 and 9-3, 10-2 and 10-3, 11-2 and 11-3, 12-2 and 12-3, 13-2 and 13-3, 14-2 and 14-3, and 16-2 and 16-3, respectively, each with a trimming process utilizing a dust collector for particulate control, each exhausting through stack ID # 7-4, 8-4, 9-4, 10-4, 11-4, 12-4, 13-4, 14-4, and 16-4, respectively; LINE 3001-3005 and 3008 each constructed in April 1996, LINE 3006-3007 each constructed in December 1994, and LINE 3009 constructed October 1997;

(j) Eight (8) storage silos, identified as Unit ID # SILO 01, SILO 02, SILO 03, SILO 04, SILO 05, SILO 06, SILO 07, and SILO 08, used to store limestone, dolomite, feldspar, borax, sand, soda ash, post consumer cullet, and a spare, respectively, each utilizing a baghouse for particulate control, each exhausting through stacks S/V ID #0-1 through 0-8, respectively; and

(k) One (1) batch raw material receiving bin, identified as Unit ID # RMH 02, four (4) day bins, identified as Unit ID # DB 01, DB 02, DB 03, and DB 05, used to store raw materials for FURN 601, FURN 602, FURN 603, and FURN 605, respectively, and one (1) intermediate batch bin, identified as Unit ID #DB 02A, each utilizing a baghouse for particulate control, exhausting through stacks S/V ID # 0-10 through 0-15.

A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

This stationary source also includes the following insignificant activities which are specifically regulated, as defined in 326 IAC 2-7-1(21):

(1) Other categories with emissions below insignificant thresholds:

(a) Fiberglass trimming with dust collector with PM emission less than twenty-five (25) pounds per day

A.4 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

(a) It is a major source, as defined in 326 IAC 2-7-1(22);

(b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

SECTION B GENERAL CONDITIONS

B.1 Permit No Defense [326 IAC 2-1-10] [IC 13]

(a) Indiana statutes from IC 13 and rules from 326 IAC, quoted in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a Part 70 permit under 326 IAC 2-7.

(b) This prohibition shall not apply to alleged violations of applicable requirements for which the Commissioner has granted a permit shield in accordance with 326 IAC 2-1-3.2 or 326 IAC 2-7-15, as set out in this permit in the Section B condition entitled “Permit Shield.”

B.2 Definitions [326 IAC 2-7-1]

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, any applicable definitions found in IC 13-11, 326 IAC 1-2 and 326 IAC 2-7 shall prevail.

B.3 Permit Term [326 IAC 2-7-5(2)]

This permit is issued for a fixed term of five (5) years from the effective date, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3.

B.4 Enforceability [326 IAC 2-7-7(a)]

(a) All terms and conditions in this permit, including any provisions designed to limit the source's potential to emit, are enforceable by IDEM.

(b) Unless otherwise stated, terms and conditions of this permit, including any provisions to limit the source’s potential to emit, are enforceable by the United States Environmental Protection Agency (U.S. EPA) and citizens under the Clean Air Act.

B.5 Termination of Right to Operate [326 IAC 2-7-10] [326 IAC 2-7-4(a)]

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least nine (9) months prior to the date of expiration of the source’s existing permit, consistent with 326 IAC 2-7-3 and 326 IAC 2-7-4(a).

B.6 Severability [326 IAC 2-7-5(5)]

The provisions of this permit are severable; a determination that any portion of this permit is invalid shall not affect the validity of the remainder of the permit.

B.7 Property Rights or Exclusive Privilege [326 IAC 2-7-5(6)(D)]

This permit does not convey any property rights of any sort, or any exclusive privilege.

B.8 Duty to Supplement and Provide Information [326 IAC 2-7-4(b)] [326 IAC 2-7-5(6)(E)]

(a) The Permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

(b) The Permittee shall furnish to IDEM, OAM within a reasonable time, any information that

IDEM, OAM may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit.

(c) Upon request, the Permittee shall also furnish to IDEM, OAM copies of records required to be kept by this permit. If the Permittee wishes to assert a claim of confidentiality over any of the furnished records, the Permittee must furnish such records to IDEM, OAM, along with a claim of confidentiality under 326 IAC 17. If requested by IDEM, OAM, or the U.S. EPA, to furnish copies of requested records directly to U. S. EPA, and if the Permittee is making a claim of confidentiality regarding the furnished records, then the Permittee must furnish such confidential records directly to the U.S. EPA along with a claim of confidentiality under 40 CFR 2, Subpart B.

B.9 Compliance with Permit Conditions [326 IAC 2-7-5(6)(A)] [326 IAC 2-7-5(6)(B)]

(a) The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit constitutes a violation of the Clean Air Act and is grounds for:

(1) Enforcement action;

(2) Permit termination, revocation and reissuance, or modification; or

(3) Denial of a permit renewal application.

(b) If shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

B.10 Certification [326 IAC 2-7-4(f)] [326 IAC 2-7-6(1)]

(a) Any application form, report, or compliance certification submitted under this permit shall contain certification by a responsible official of truth, accuracy, and completeness. This certification, and any other certification required under this permit, shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

(b) One (1) certification shall be included, on the attached Certification Form, with each submittal.

(c) A responsible official is defined at 326 IAC 2-7-1(34).

B.11 Annual Compliance Certification [326 IAC 2-7-6(5)]

(a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. The certification shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted in letter form no later than July 1 of each year to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Air Enforcement Branch - Indiana (AE-17J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

(b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAM on or before the date it is due.

(c) The annual compliance certification report shall include the following:

(1) The identification of each term or condition of this permit that is the basis of the certification;

(2) The compliance status;

(3) Whether compliance was based on continuous or intermittent data;

(4) The methods used for determining compliance of the source, currently and over the reporting period consistent with 326 IAC 2-7-5(3);

(5) Any insignificant activity that has been added without a permit revision; and

(6) Such other facts, as specified in Sections D of this permit, as IDEM, OAM may require to determine the compliance status of the source.

The submittal by the Permittee does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

B.12 Preventive Maintenance Plan [326 IAC 2-7-5(1),(3) and (13)] [326 IAC 2-7-6(1) and (6)] [326 IAC 1-6-3]

(a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMP) within ninety (90) days after issuance of this permit, including the following information on each facility:

(1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

(2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and

(3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If due to circumstances beyond its control, the PMP cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

(b) The Permittee shall implement the Preventive Maintenance Plans as necessary to ensure that lack of proper maintenance does not cause or contribute to a violation of any limitation on emissions or potential to emit.

(c) PMP's shall be submitted to IDEM, OAM upon request and shall be subject to review and approval by IDEM, OAM.

B.13 Emergency Provisions [326 IAC 2-7-16]

(a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation, except as provided in 326 IAC 2-7-16.

(b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:

(1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;

(2) The permitted facility was at the time being properly operated;

(3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;

(4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAM within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 1-800-451-6027 (ask for Office of Air Management, Compliance Section), or
Telephone Number: 317-233-5674 (ask for Compliance Section)
Facsimile Number: 317-233-5967

(5) For each emergency lasting one (1) hour or more, the Permittee submitted notice, either in writing or facsimile, of the emergency to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

within two (2) working days of the time when emission limitations were exceeded due to the emergency.

The notice fulfills the requirement of 326 IAC 2-7-5(3)(C)(ii) and must contain the following:

(A) A description of the emergency;

(B) Any steps taken to mitigate the emissions; and

(C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(6) The Permittee immediately took all reasonable steps to correct the emergency.

(c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.

(d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions) for sources subject to this rule after the effective date of this rule. This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.

(e) IDEM, OAM may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4-(c)(9) be revised in response to an emergency.

(f) Failure to notify IDEM, OAM by telephone or facsimile of an emergency lasting more than one (1) hour in compliance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-7 and any other applicable rules.

(g) Operations may continue during an emergency only if the following conditions are met:

(1) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.

(2) If an emergency situation causes a deviation from a health-based limit, the Permittee may not continue to operate the affected emissions facilities unless:

(A) The Permittee immediately takes all reasonable steps to correct the emergency situation and to minimize emissions; and

(B) Continued operation of the facilities is necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value.

Any operation shall continue no longer than the minimum time required to prevent the situations identified in (g)(2)(B) of this condition.

B.14 Permit Shield [326 IAC 2-7-15]

(a) This condition provides a permit shield as addressed in 326 IAC 2-7-15.

(b) This permit shall be used as the primary document for determining compliance with applicable requirements established by previously issued permits. Compliance with the conditions of this permit shall be deemed in compliance with any applicable requirements as of the date of permit issuance, provided that:

(1) The applicable requirements are included and specifically identified in this permit; or

(2) The permit contains an explicit determination or concise summary of a determination that other specifically identified requirements are not applicable.

(c) If, after issuance of this permit, it is determined that the permit is in nonconformance with an applicable requirement that applied to the source on the date of permit issuance, including any term or condition from a previously issued construction or operation permit, IDEM, OAM shall immediately take steps to reopen and revise this permit and issue a compliance order to the Permittee to ensure expeditious compliance with the applicable requirement until the permit is reissued. The permit shield shall continue in effect so long as the Permittee is in compliance with the compliance order.

(d) No permit shield shall apply to any permit term or condition that is determined after issuance of this permit to have been based on erroneous information supplied in the permit application.

(e) Nothing in 326 IAC 2-7-15 or in this permit shall alter or affect the following:

(1) The provisions of Section 303 of the Clean Air Act (emergency orders), including the authority of the U.S. EPA under Section 303 of the Clean Air Act;

(2) The liability of the Permittee for any violation of applicable requirements prior to or at the time of this permit's issuance;

(3) The applicable requirements of the acid rain program, consistent with Section 408(a) of the Clean Air Act; and

(4) The ability of U.S. EPA to obtain information from the Permittee under Section 114 of the Clean Air Act.

(f) This permit shield is not applicable to any change made under 326 IAC 2-7-20(b)(2) (Sections 502(b)(10) of the Clean Air Act changes) and 326 IAC 2-7-20(c)(2) (trading based on State Implementation Plan (SIP) provisions).

(g) This permit shield is not applicable to modifications eligible for group processing until after IDEM, OAM has issued the modifications. [326 IAC 2-7-12(c)(7)]

(h) This permit shield is not applicable to minor Part 70 permit modifications until after IDEM, OAM has issued the modification. [326 IAC 2-7-12(b)(8)]

B.15 Multiple Exceedances [326 IAC 2-7-5(1)(E)]

Any exceedance of a permit limitation or condition contained in this permit, which occurs contemporaneously with an exceedance of an associated surrogate or operating parameter established to detect or assure compliance with that limit or condition, both arising out of the same act or occurrence, shall constitute a single potential violation of this permit.

B.16 Deviations from Permit Requirements and Conditions [326 IAC 2-7-5(3)(C)(ii)]

(a) Deviations from any permit requirements (for emergencies see Section B - Emergency Provisions), the probable cause of such deviations, and any response steps or preventive measures taken shall be reported to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

within ten (10) calendar days from the date of the discovery of the deviation.

(b) A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit or a rule. It does not include:

(1) An excursion from compliance monitoring parameters as identified in Section D of this permit unless tied to an applicable rule or limit; or

(2) An emergency as defined in 326 IAC 2-7-1(12); or

(3) Failure to implement elements of the Preventive Maintenance Plan unless lack of maintenance has caused or contributed to a deviation.

(4) Failure to make or record information required by the compliance monitoring provisions of Section D unless such failure exceeds 5% of the required data in any calendar quarter.

A Permittee's failure to take the appropriate response step when an excursion of a compliance monitoring parameter has occurred is a deviation.

(c) Written notification shall be submitted on the attached Emergency/Deviation Occurrence Reporting Form or its substantial equivalent. The notification does not need to be certified by the "responsible official" as defined by 326 IAC 2-7-1(34).

(d) Proper notice submittal under 326 IAC 2-7-16 satisfies the requirement of this subsection.

B.17 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-7-5(6)(C)] [326 IAC 2-7-8(a)] [326 IAC 2-7-9]

(a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Part 70 permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-7-5(6)(C)]

(b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAM determines any of the following:

(1) That this permit contains a material mistake.

(2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.

(3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-7-9(a)(3)]

(c) Proceedings by IDEM, OAM to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-7-9(b)]

(d) The reopening and revision of this permit, under 326 IAC 2-7-9(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAM at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAM may provide a shorter time period in the case of an emergency. [326 IAC 2-7-9(c)]

B.18 Permit Renewal [326 IAC 2-7-4]

(a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAM, and shall include the information specified in 326 IAC 2-7-4. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

(b) Timely Submittal of Permit Renewal [326 IAC 2-7-4(a)(1)(D)]

(1) A timely renewal application is one that is:

(A) Submitted at least nine (9) months prior to the date of the expiration of this permit; and

(B) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAM on or before the date it is due. [326 IAC 2-5-3]

(2) If IDEM, OAM, upon receiving a timely and complete permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, including any permit shield provided in 326 IAC 2-7-15, until the renewal permit has been issued or denied.

(c) Right to Operate After Application for Renewal [326 IAC 2-7-3]
If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-7 until IDEM, OAM takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified in writing by IDEM, OAM, any additional information identified as being needed to process the application.

(d) United States Environmental Protection Agency Authority [326 IAC 2-7-8(e)]
If IDEM, OAM fails to act in a timely way on a Part 70 permit renewal, the U.S. EPA may invoke its authority under Section 505(e) of the Clean Air Act to terminate or revoke and reissue a Part 70 permit.

B.19 Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]

(a) The Permittee must comply with the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this permit.

(b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

Any such application should be certified by the "responsible official" as defined by 326 IAC 2-7-1(34) only if a certification is required by the terms of the applicable rule.

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

B.20 Permit Revision Under Economic Incentives and Other Programs [326 IAC 2-7-5(8)] [326 IAC 2-7-12 (b)(2)]

(a) No Part 70 permit revision shall be required under any approved economic incentives, marketable Part 70 permits, emissions trading, and other similar programs or processes for changes that are provided for in a Part 70 permit.

(b) Notwithstanding 326 IAC 2-7-12(b)(1)(D)(i) and 326 IAC 2-7-12(c)(1), minor Part 70 permit modification procedures may be used for Part 70 modifications involving the use of economic incentives, marketable Part 70 permits, emissions trading, and other similar approaches to the extent that such minor Part 70 permit modification procedures are explicitly provided for in the applicable State Implementation Plan (SIP) or in applicable requirements promulgated or approved by the U.S. EPA.

B.21 Changes Under Section 502(b)(10) of the Clean Air Act [326 IAC 2-7-20(b)]

The Permittee may make Section 502(b)(10) of the Clean Air Act changes (this term is defined at 326 IAC 2-7-1(36)) without a permit revision, subject to the constraint of 326 IAC 2-7-20(a) and the following additional conditions:

(a) For each such change, the required written notification shall include a brief description of the change within the source, the date on which the change will occur, any change in emissions, and any permit term or condition that is no longer applicable as a result of the change.

(b) The permit shield, described in 326 IAC 2-7-15, shall not apply to any change made under 326 IAC 2-7-20(b).

B.22 Operational Flexibility [326 IAC 2-7-20]

(a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-7-20(b), (c), or (e), without a prior permit revision, if each of the following conditions is met:

(1) The changes are not modifications under any provision of Title I of the Clean Air Act;

(2) Any approval required by 326 IAC 2-1 has been obtained;

(3) The changes do not result in emissions which exceed the emissions allowable under this permit (whether expressed herein as a rate of emissions or in terms of total emissions);

(4) The Permittee notifies the:

Indiana Department of Environmental Management
Permits Branch, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

in advance of the change by written notification at least ten (10) days in advance of the proposed change. The Permittee shall attach every such notice to the Permittee's copy of this permit; and

(5) The Permittee maintains records on-site which document, on a rolling five (5) year basis, all such changes and emissions trading that are subject to 326 IAC 2-7-20(b), (c), or (e) and makes such records available, upon reasonable request, for public review.

Such records shall consist of all information required to be submitted to IDEM, OAM in the notices specified in 326 IAC 2-7-20(b), (c)(1), and (e)(2).

(b) For each such Section 502(b)(10) of the Clean Air Act change, the required written notification shall include the following:

(1) A brief description of the change within the source;

(2) The date on which the change will occur;

(3) Any change in emissions; and

(4) Any permit term or condition that is no longer applicable as a result of the change.

The notification which shall be submitted by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(c) Emission Trades [326 IAC 2-7-20(c)]
The Permittee may trade increases and decreases in emissions in the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-7-20(c).

(d) Alternative Operating Scenarios [326 IAC 2-7-20(d)]
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-7-5(9). No prior notification of IDEM, OAM, or U.S. EPA is required.

(e) Backup fuel switches specifically addressed in, and limited under, Section D of this permit shall not be considered alternative operating scenarios. Therefore, the notification requirements of part (a) of this condition do not apply.

B.23 Construction Permit Requirement [326 IAC 2]

Except as allowed by Indiana P.L. 130-1996 Section 12, as amended by P.L. 244-1997, modification, construction, or reconstruction shall be approved as required by and in accordance with 326 IAC 2.

B.24 Inspection and Entry [326 IAC 2-7-6(2)]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, the Permittee shall allow IDEM, OAM, U.S. EPA, or an authorized representative to perform the following:

(a) Enter upon the Permittee's premises where a Part 70 source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;

(b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

(c) Inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;

(d) Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and

(e) Utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.
[326 IAC 2-7-6(6)]

(1) The Permittee may assert a claim that, in the opinion of the Permittee, information removed or about to be removed from the source by IDEM, OAM, or an authorized representative, contains information that is confidential under IC 5-14-3-4(a). The claim shall be made in writing before or at the time the information is removed from the source. In the event that a claim of confidentiality is so asserted, neither IDEM, OAM, nor an authorized representative, may disclose the information unless and until IDEM, OAM makes a determination under 326 IAC 17-1-7 through 326 IAC 17-1-9 that the information is not entitled to confidential treatment and that determination becomes final. [IC 5-14-3-4; IC 13-14-11-3; 326 IAC 17-1-7 through 326 IAC 17-1-9]

(2) The Permittee, and IDEM, OAM acknowledge that the federal law applies to claims of confidentiality made by the Permittee with regard to information removed or about to be removed from the source by U.S. EPA. [40 CFR Part 2, Subpart B]

B.25 Transfer of Ownership or Operation [326 IAC 2-1-6] [326 IAC 2-7-11]

Pursuant to 326 IAC 2-1-6 and 326 IAC 2-7-11:

(a) In the event that ownership of this source is changed, the Permittee shall notify IDEM, OAM, Permits Branch, within thirty (30) days of the change. Notification shall include a written agreement containing a specific date for transfer of permit responsibility, coverage, and liability between the Permittee and the new owner.

(b) The written notification shall be sufficient to transfer the permit to the new owner by an administrative amendment pursuant to 326 IAC 2-7-11. The notification which shall be submitted by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(c) IDEM, OAM shall reserve the right to issue a new permit.

B.26 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-7-5(7)]

(a) The Permittee shall pay annual fees to IDEM, OAM, within thirty (30) calendar days of receipt of a billing. If the Permittee does not receive a bill from IDEM, OAM the applicable fee is due April 1 of each year.

(b) Failure to pay may result in administrative enforcement action, or revocation of this permit.

(c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-0425 (ask for OAM, Technical Support and Modeling Section), to determine the appropriate permit fee.

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

Emission Limitations and Standards [326 IAC 2-7-5(1)]

C.1 Particulate Matter Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) pounds per hour [326 IAC 6-3-2(c)]

Pursuant to 326 IAC 6-3-2(c), the allowable particulate matter emissions rate from any process not already regulated by 326 IAC 6-1 or any New Source Performance Standard, and which has a maximum process weight rate less than 100 pounds per hour shall not exceed 0.551 pounds per hour.

C.2 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period, as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.3 Open Burning [326 IAC 4-1] [IC 13-17-9]

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1. 326 IAC 4-1-3 (a)(2)(A) and (B) are not federally enforceable.

C.4 Incineration [326 IAC 4-2][326 IAC 9-1-2]

The Permittee shall not operate an incinerator or incinerate any waste or refuse except as provided in 326 IAC 4-2 and 326 IAC 9-1-2.

C.5 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.

C.6 Operation of Equipment [326 IAC 2-7-6(6)]

All air pollution control equipment listed in this permit and used to comply with an applicable requirement shall be operated at all times that the emission units vented to the control equipment are in operation.

C.7 Stack Height [326 IAC 1-7]

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted.

C.8 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61.140]

(a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.

(b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:

(1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or

(2) If there is a change in the following:

(A) Asbestos removal or demolition start date;

(B) Removal or demolition contractor; or

(C) Waste disposal site.

(c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).

(d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management
Asbestos Section, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

The notifications do not require a certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(e) Procedures for Asbestos Emission Control
The Permittee shall comply with the emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-4 emission control requirements are mandatory for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.

(f) Indiana Accredited Asbestos Inspector
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Accredited Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement that the inspector be accredited is federally enforceable.

Testing Requirements [326 IAC 2-7-6(1)]

C.9 Performance Testing [326 IAC 3-6]

(a) All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing methods approved by IDEM, OAM.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

no later than thirty-five (35) days prior to the intended test date. The Permittee shall submit a notice of the actual test date to the above address so that it is received at least two weeks prior to the test date.

(b) All test reports must be received by IDEM, OAM within forty-five (45) days after the completion of the testing. An extension may be granted by the Commissioner, if the source submits to IDEM, OAM, a reasonable written explanation within five (5) days prior to the end of the initial forty-five (45) day period.

The documentation submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Compliance Monitoring Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)]

C.10 Compliance Schedule [326 IAC 2-7-6(3)]

The Permittee:

(a) Has certified that all facilities at this source are in compliance with all applicable requirements; and

(b) Has submitted a statement that the Permittee will continue to comply with such requirements; and

(c) Will comply with such applicable requirements that become effective during the term of this permit.

C.11 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

Compliance with applicable requirements shall be documented as required by this permit. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment, no more than ninety (90) days after receipt of this permit. If due to circumstances beyond its control, this schedule cannot be met, the Permittee may extend compliance schedule an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

in writing, prior to the end of the initial ninety (90) day compliance schedule, with full justification

of the reasons for the inability to meet this date.

The notification which shall be submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

C.12 Maintenance of Monitoring Equipment [326 IAC 2-7-5(3)(A)(iii)]

(a) In the event that a breakdown of the monitoring equipment occurs, a record shall be made of the times and reasons of the breakdown and efforts made to correct the problem. To the extent practicable, supplemental or intermittent monitoring of the parameter should be implemented at intervals no less frequent than required in Section D of this permit until such time as the monitoring equipment is back in operation. In the case of continuous monitoring, supplemental or intermittent monitoring of the parameter should be implemented at intervals no less than one (1) hour until such time as the continuous monitor is back in operation.

(b) The Permittee shall install, calibrate, quality assure, maintain, and operate all necessary monitors and related equipment. In addition, prompt corrective action shall be initiated whenever indicated.

C.13 Monitoring Methods [326 IAC 3]

Any monitoring or testing performed to meet the applicable requirements of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, or other approved methods as specified in this permit.

C.14 Pressure Gauge Specifications

Whenever a condition in this permit requires the measurement of pressure drop across any part of the unit or its control device, the gauge employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent (±2%) of full scale reading. Such gauges shall be calibrated every six (6) months.

Corrective Actions and Response Steps [326 IAC 2-7-5] [326 IAC 2-7-6]

C.15 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]

Pursuant to 326 IAC 1-5-2 (Emergency Reduction Plans; Submission):

(a) The Permittee prepared and submitted written emergency reduction plans (ERPs) consistent with safe operating procedures on March 19, 1999.

(b) If the ERP is disapproved by IDEM, OAM, the Permittee shall have an additional thirty (30) days to resolve the differences and submit an approvable ERP.

(c) These ERPs shall state those actions that will be taken, when each episode level is declared, to reduce or eliminate emissions of the appropriate air pollutants.

(d) Said ERPs shall also identify the sources of air pollutants, the approximate amount of reduction of the pollutants, and a brief description of the manner in which the reduction will be achieved.

(e) Upon direct notification by IDEM, OAM, that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the

approved ERP for the appropriate episode level.
[326 IAC 1-5-3]

C.16 Risk Management Plan [326 IAC 2-7-5(12)] [40 CFR 68.215]

If a regulated substance, subject to 40 CFR 68, is present in a process in more than the threshold quantity, 40 CFR 68 is an applicable requirement and the Permittee shall:

(a) Submit:

(1) A compliance schedule for meeting the requirements of 40 CFR 68 by the date provided in 40 CFR 68.10(a); or

(2) As a part of the compliance certification submitted under 326 IAC 2-7-6(5), a certification statement that the source is in compliance with all the requirements of 40 CFR 68, including the registration and submission of a Risk Management Plan (RMP); and

(3) A verification to IDEM, OAM that a RMP or a revised plan was prepared and submitted as required by 40 CFR 68.

(b) Provide annual certification to IDEM, OAM that the Risk Management Plan is being properly implemented.

All documents submitted pursuant to this condition shall include the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

C.17 Compliance Monitoring Plan - Failure to Take Response Steps [326 IAC 2-7-5][326 IAC 2-7-6] [326 IAC 1-6]

(a) The Permittee is required to implement a compliance monitoring plan to ensure that reasonable information is available to evaluate its continuous compliance with applicable requirements. This compliance monitoring plan is comprised of:

(1) This condition;

(2) The Compliance Determination Requirements in Section D of this permit;

(3) The Compliance Monitoring Requirements in Section D of this permit;

(4) The Record Keeping and Reporting Requirements in Section C (Monitoring Data Availability, General Record Keeping Requirements, and General Reporting Requirements) and in Section D of this permit; and

(5) A Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. CRP's shall be submitted to IDEM, OAM upon request and shall be subject to review and approval by IDEM, OAM. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee and maintained on site, and is comprised of :

(A) Response steps that will be implemented in the event that compliance related information indicates that a response step is needed pursuant to the requirements of Section D of this permit; and

(B) A time schedule for taking such response steps including a schedule for

devising additional response steps for situations that may not have been predicted.

(b) For each compliance monitoring condition of this permit, appropriate response steps shall be taken when indicated by the provisions of that compliance monitoring condition. Failure to perform the actions detailed in the compliance monitoring conditions or failure to take the response steps within the time prescribed in the Compliance Response Plan, shall constitute a violation of the permit unless taking the response steps set forth in the Compliance Response Plan would be unreasonable.

(c) After investigating the reason for the excursion, the Permittee is excused from taking further response steps for any of the following reasons:

(1) The monitoring equipment malfunctioned, giving a false reading. This shall be an excuse from taking further response steps providing that prompt action was taken to correct the monitoring equipment.

(2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for an administrative amendment to the permit, and such request has not been denied or;

(3) An automatic measurement was taken when the process was not operating; or

(4) The process has already returned to operating within “normal” parameters and no response steps are required.

(d) Records shall be kept of all instances in which the compliance related information was not met and of all response steps taken. In the event of an emergency, the provisions of 326 IAC 2-7-16 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.

C.18 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5] [326 IAC 2-7-6]

(a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate corrective actions. The Permittee shall submit a description of these corrective actions to IDEM, OAM, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize emissions from the affected facility while the corrective actions are being implemented. IDEM, OAM shall notify the Permittee within thirty (30) days, if the corrective actions taken are deficient. The Permittee shall submit a description of additional corrective actions taken to IDEM, OAM within thirty (30) days of receipt of the notice of deficiency. IDEM, OAM reserves the authority to use enforcement activities to resolve noncompliant stack tests.

(b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM,

OAM that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAM may extend the retesting deadline. Failure of the second test to demonstrate compliance with the appropriate permit conditions may be grounds for immediate revocation of the permit to operate the affected facility.

The documents submitted pursuant to this condition do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

C.19 Emission Statement [326 IAC 2-7-5(3)(C)(iii)][326 IAC 2-7-5(7)][326 IAC 2-7-19(c)][326 IAC 2-6]

(a) The Permittee shall submit an annual emission statement certified pursuant to the requirements of 326 IAC 2-6, that must be received by July 1 of each year and must comply with the minimum requirements specified in 326 IAC 2-6-4. The annual emission statement shall meet the following requirements:

(1) Indicate actual emissions of criteria pollutants from the source, in compliance with 326 IAC 2-6 (Emission Reporting);

(2) Indicate actual emissions of other regulated pollutants from the source, for purposes of Part 70 fee assessment.

(b) The annual emission statement covers the twelve (12) consecutive month time period starting January 1 and ending December 31. The annual emission statement must be submitted to:

Indiana Department of Environmental Management
Technical Support and Modeling Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

(c) The annual emission statement required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAM on or before the date it is due.

C.20 Monitoring Data Availability [326 IAC 2-7-6(1)] [326 IAC 2-7-5(3)]

(a) With the exception of performance tests conducted in accordance with Section C-Performance Testing, all observations, sampling, maintenance procedures, and record keeping, required as a condition of this permit shall be performed at all times the equipment is operating at normal representative conditions.

(b) As an alternative to the observations, sampling, maintenance procedures, and record keeping of subsection (a) above, when the equipment listed in Section D of this permit is not operating, the Permittee shall either record the fact that the equipment is shut down or perform the observations, sampling, maintenance procedures, and record keeping that would otherwise be required by this permit.

(c) If the equipment is operating but abnormal conditions prevail, additional observations and sampling should be taken with a record made of the nature of the abnormality.

(d) If for reasons beyond its control, the operator fails to make required observations, sampling, maintenance procedures, or record keeping, reasons for this must be recorded.

(e) At its discretion, IDEM may excuse such failure providing adequate justification is documented and such failures do not exceed five percent (5%) of the operating time in any quarter.

(f) Temporary, unscheduled unavailability of staff qualified to perform the required observations, sampling, maintenance procedures, or record keeping shall be considered a valid reason for failure to perform the requirements stated in (a) above.

C.21 General Record Keeping Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-6]

(a) Records of all required monitoring data and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location for a minimum of three (3) years and available upon the request of an IDEM, OAM representative. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a written request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

(b) Records of required monitoring information shall include, where applicable:

(1) The date, place, and time of sampling or measurements;

(2) The dates analyses were performed;

(3) The company or entity performing the analyses;

(4) The analytic techniques or methods used;

(5) The results of such analyses; and

(6)The operating conditions existing at the time of sampling or measurement.

(c) Support information shall include, where applicable:

(1) Copies of all reports required by this permit;

(2) All original strip chart recordings for continuous monitoring instrumentation;

(3) All calibration and maintenance records;

(4) Records of preventive maintenance shall be sufficient to demonstrate that improper maintenance did not cause or contribute to a violation of any limitation on emissions or potential to emit. To be relied upon subsequent to any such violation, these records may include, but are not limited to: work orders, parts

inventories, and operator's standard operating procedures. Records of response steps taken shall indicate whether the response steps were performed in accordance with the Compliance Response Plan required by Section C - Compliance Monitoring Plan - Failure to take Response Steps, of this permit, and whether a deviation from a permit condition was reported. All records shall briefly describe what maintenance and response steps were taken and indicate who performed the tasks.

(d) All record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

C.22 General Reporting Requirements [326 IAC 2-7-5(3)(C)]

(a) To affirm that the source has met all the compliance monitoring requirements stated in this permit the source shall submit a Quarterly Compliance Monitoring Report. Any deviation from the requirements and the date(s) of each deviation must be reported.

(b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

(c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAM on or before the date it is due.

(d) Unless otherwise specified in this permit, any quarterly report shall be submitted within thirty (30) days of the end of the reporting period.

(e) All instances of deviations as described in Section B- Deviations from Permit Requirements Conditions must be clearly identified in such reports.

(f) Any corrective actions or response steps taken as a result of each deviation must be clearly identified in such reports.

(g) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period.

The documents submitted pursuant to this condition do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Stratospheric Ozone Protection

C.23 Compliance with 40 CFR 82 and 326 IAC 22-1

Pursuant to 40 CFR 82 (Protection of Stratospheric Ozone), Subpart F, except as provided for motor vehicle air conditioners in Subpart B, the Permittee shall comply with the standards for

recycling and emissions reduction:

(a) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to 40 CFR 82.156.

(b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.

(c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

SECTION D.1 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

(a) One (1) electrically heated glass melting furnace, identified as Unit ID # FURN 601, installed in 1978, exhausting through ID # 1-1;

(b) One (1) fiberglass manufacturing line consisting of forming, curing, and cooling sections, identified as Unit ID # MFG 601, installed in 1978, operating at a rated heat input capacity of 30 million (MM) British thermal units (Btu) per hour, combusting natural gas, utilizing one (1) wet electrostatic precipitator for particulate control, and two (2) natural gas fired thermal oxidizers with a rated combined heat input capacity of 36 MMBtu per hour, exhausting through one (1) stack ID #1-2;

(c) One (1) gas-fired (with electric boost) glass melting furnace, identified as Unit ID # FURN 602, installed in 1983, operating at a rated heat input capacity of 30 MMBtu per hour, combusting natural gas, utilizing one (1) dry electrostatic precipitator for particulate control, exhausting through one (1) stack ID #2-1;

(d) One (1) fiberglass manufacturing line consisting of forming, curing, and cooling sections, identified as Unit ID # MFG 602, installed in 1983, operating at a rated heat input capacity of 40 MMBtu per hour, combusting natural gas, utilizing one (1) wet electrostatic precipitator for particulate control, and one (1) natural gas fired afterburner with a rated combined heat input capacity of 30 MMBtu per hour, exhausting through one (1) stack ID #2-2;

(e) One (1) electrically heated glass melting furnace, identified as Unit ID # FURN 603, installed in 1978, exhausting through one (1) stack ID #3-1;

(f) One (1) fiberglass manufacturing line consisting of forming section, identified as Unit ID # MFG 603, installed in 1978, operating at a rated heat input capacity of 15 million (MM) British thermal units (Btu) per hour, combusting natural gas, utilizing two (2) wet scrubbers for particulate control, exhausting through one (1) stack ID #-3-2;

(g) One (1) natural gas-fired glass melting furnace, identified as Unit ID # FURN 605, installed in 1983, operating at a rated heat input capacity of 10 MMBtu per hour, exhausting through one (1) stack ID #5-1; and

(h) One (1) fiberglass manufacturing line consisting of forming, curing, and cooling sections, identified as Unit ID # MFG 605, installed in 1983, operating at a rated heat input capacity of 20 MMBtu per hour, combusting natural gas, exhausting through four (4) stacks ID #5-2, 5-3, 5-4, and 5-5.

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.1.1 Particulate Matter Emission Limitation [326 IAC 12 (40 CFR 60.290, Subpart CC)]

Pursuant to 326 IAC 12 (40 CFR 60.290, Subpart CC) "Standard of Performance for Glass Manufacturing Plants", the particulate matter emissions from the one (1) gas-fired (with electric boost) glass melting furnace (FURN 602) shall be limited to 0.25 grams of particulate per kg of glass produced.

D.1.2 Emission Limitation [326 IAC 11-4-4]

Pursuant to 326 IAC 11-4-4 (Fiberglass Insulation Manufacturing - Emission Limitation), emission limitations for particulate matter have been set forth in Indiana's State Implementation Plan (SIP) as follows:

Process/Facility	Max. Hourly Emissions (lbs/hour)	Max. Yearly Emissions (tons/yr)
MFG 601 forming + oven (formerly 602 forming plus oven)	28.28	123.9
MFG 602 forming + oven (formerly 602 forming plus oven)	33.27	145.7
MFG 603 forming + oven (formerly 603 forming plus oven)	16.49	72.2
FURN 605 furnace (formerly 204 furnace)	10.00	43.8
MFG 605 forming (formerly 204 forming)	15.00	65.7
MFG 605 oven (formerly 204 oven)	8.00	35.0

The Permittee is required to use at least 50% post-consumer recycled glass in its mixed batch formulation for Furnace 605, unless the Permittee demonstrates to IDEM, OAM's satisfaction that Furnace 605 can achieve compliance with its particulate emission limit using a lesser amount of post-consumer recycled glass.

D.1.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities described in Section D.1.1 and their control devices.

Compliance Determination Requirements

D.1.4 Testing Requirements [326 IAC 2-7-6(1),(6)]

During the period between 30 and 36 months after issuance of this permit, the Permittee shall perform PM testing on the facilities described under Section D.1(b), (c), (d), (e), (f), (g), and (h) utilizing the procedures set forth in 40 CFR 60, Appendix A, Methods 1-5 or other methods as approved by the Commissioner. This test shall be repeated at least once every two (2) years from the date of this valid compliance demonstration. In addition to these requirements, IDEM may require compliance testing when necessary to determine if the facility is in compliance.

D.1.5 Particulate Matter (PM)

The wet electrostatic precipitator (for MFG 601 and 602), wet scrubber (for MFG 603), and the dry electrostatic precipitator (for FURN 602) for PM control shall be in operation at all times when MFG 601, 602, 603 and FURN 602 are in operation and exhausting to the outside atmosphere.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.1.6 Visible Emissions Notations

(a) Daily visible emission notations of all manufacturing line stack exhausts shall be performed during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

D.1.7 Parametric Monitoring

(a) The Permittee shall record the total gas pressure drop across the wet scrubber used in conjunction with the manufacturing line (MFG 603), at least once daily when the manufacturing line (MFG 603) is in operation. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the wet scrubber shall be maintained at not less than 10.0 inches of water or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.

(b) The Permittee shall record the total secondary voltage across each of the wet electrostatic precipitators used in conjunction with the manufacturing lines (MFG 601 and 602), at least once daily when the manufacturing lines (MFG 601 and 602) are in operation. The Compliance Response Plan for these units shall establish the appropriate ranges and shall contain troubleshooting contingency and response steps for when the voltage reading is outside of the stated ranges for any one reading.

(c) The Permittee shall record the total secondary voltage across the dry electrostatic precipitator used in conjunction with FURN 602, at least once daily when FURN 602 is in operation. The Compliance Response Plan for these units shall establish the appropriate ranges and shall contain troubleshooting contingency and response steps for when the voltage reading is outside of the stated ranges for any one reading.

The instrument used for determining the pressure and voltage shall comply with Section C -

Pressure Gauge Specifications, of this permit, shall be subject to approval by IDEM, OAM, and shall be calibrated quarterly.

D.1.8 Wet Scrubber and Electrostatic Precipitator Inspections

An inspection shall be performed each calender quarter of all scrubbers and electrostatic precipitators controlling manufacturing lines (MFG 601, 602, 603) and FURN 602.

D.1.9 Broken or Failed Wet Scrubbers and/or Electrostatic Precipitators Detection

In the event that wet scrubbers and/or electrostatic precipitators failure has been observed.

(a) The affected units will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) hours of discovery of the failure and shall include a timetable for completion. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

(b) For scrubbers and/or electrostatic precipitators, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.1.10 Record Keeping Requirements

(a) To document compliance with Condition D.1.6, the Permittee shall maintain records of daily visible emission notations of the manufacturing lines (MFG 601-605) stack exhaust.

(b) To document compliance with Condition D.1.7, the Permittee shall maintain the following:

(1) Daily records of the following operational parameters during normal operation:

(A) Daily differential static pressure; and

(B) Daily secondary voltage readings.

(2) Documentation of all response steps implemented, per event .

(d) To document compliance with Condition D.1.8, the Permittee shall maintain records of the results of the inspections required under Condition D.1.8.

(e) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.1.11 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.1.1 and D.1.2 shall be submitted to the address listed in Section C - General Reporting Requirements, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.

SECTION D.2 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

Nine (9) fiberglass pipe insulation production lines consisting of nine (9) natural gas fired curing ovens, identified as Unit ID # LINE 3001 - 3009, respectively, each with a maximum heat input capacity of 5 MMBtu per hour, each exhausting through two (2) stacks ID # 7-2 and 7-3, 8-2 and 8-3, 9-2 and 9-3, 10-2 and 10-3, 11-2 and 11-3, 12-2 and 12-3, 13-2 and 13-3, 14-2 and 14-3, and 16-2 and 16-3, respectively, each with a trimming process utilizing a dust collector for particulate control, each exhausting through stack ID # 7-4, 8-4, 9-4, 10-4, 11-4, 12-4, 13-4, 14-4, and 16-4, respectively; LINE 3001-3005 and 3008 each constructed in April 1996, LINE 3006-3007 each constructed in December 1994, and LINE 3009 constructed October 1997.

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.2.1 Particulate Matter Limitation (PM) [326 IAC 12 (40 CFR 60.680)]

Pursuant to 326 IAC 12 (40 CFR 40 CFR 60.680, Subpart PPP) "Standard of Performance for Wool Fiberglass Insulation Manufacturing Plants", the particulate matter emissions from the nine (9) fiberglass pipe insulation production lines shall be limited to 5.5 kg/Mg (11.0 lb/ton) of glass pulled.

D.2.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and control devices.

Compliance Determination Requirements

D.2.3 Testing Requirements [326 IAC 2-7-6(1),(6)]

During the period between 30 and 36 months after issuance of this permit, the Permittee shall perform PM testing on 3001-3009 oven inlet and outlet utilizing the procedures set forth in 40 CFR 60 or other methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. In addition to these requirements, IDEM may require compliance testing when necessary to determine if the facility is in compliance.

D.2.4 Particulate Matter (PM)

Each dust collector for PM control on the fiberglass trimming process shall be in operation at all times when the its fiberglass pipe insulation production line is in operation.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.2.5 Visible Emissions Notations

(a) Daily visible emission notations of the nine (9) fiberglass pipe insulation production lines stack exhaust shall be performed during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

D.2.6 Parametric Monitoring

The Permittee shall record the leak detector picoampere (pA) for each dust collector on the fiberglass trimming operation used in conjunction with the nine (9) fiberglass pipe insulation production lines, at least once daily when the nine (9) fiberglass production lines are in operation. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, leak detectors will be operated at a maximum set point of 11 pA or a range established during a stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pA display reading is outside of the above mentioned range for any one reading.

D.2.7 Dust Collector Inspections

An inspection shall be performed each calender quarter of all dust collectors controlling the nine (9) fiberglass pipe insulation production lines.

D.2.8 Broken or Failed Dust Collector Detection

In the event that dust collector failure has been observed.

(a) The affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) hours of discovery of the failure and shall include a timetable for completion. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

(b) For dust collector, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.2.9 Record Keeping Requirements

(a) To document compliance with Condition D.2.4**,** the Permittee shall maintain records of daily visible emission notations of the nine (9) fiberglass pipe insulation production lines taken in accordance with Condition D.2.5.

(b) To document compliance with Condition D.2.6, the Permittee shall maintain the following:

(1) Daily records of picoampere readings.

(2) Daily records of the following operational parameters during normal operation:

(A) Cleaning cycle: frequency and differential pressure

(3) Documentation of all response steps implemented, per event .

(4) Operation and preventive maintenance logs, including work purchases orders, shall be maintained.

(5) Quality Assurance/Quality Control (QA/QC) procedures or its equivalent.

(6) Operator standard operating procedures (SOP) or its equivalent.

(7) Manufacturer's specifications or its equivalent.

(8) Equipment "troubleshooting" contingency plan.

(9) Documentation of the dates vents are redirected.

(b) To document compliance with Condition D.2.7, the Permittee shall maintain records of the results of the inspections required under Condition D.2.7.

(c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.2.10 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.2.1 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.

SECTION D.3 FACILITY OPERATION CONDITIONS

Emission Limitations and Standards [326 IAC 2-7-5(1)]

Facility Description [326 IAC 2-7-5(15)]

(a) Eight (8) storage silos, identified as Unit ID # SILO 01, SILO 02, SILO 03, SILO 04, SILO 05, SILO 06, SILO 07, and SILO 08, used to store limestone, dolomite, feldspar, borax, sand, soda ash, post consumer cullet, and a spare, respectively, each utilizing a baghouse for particulate control, each exhausting through stacks S/V ID #0-1 through 0-8, respectively; and

(b) One (1) batch raw material receiving bin, identified as Unit ID # RMH 02, four (4) day bins, identified as Unit ID # DB 01, DB 02, DB 03, and DB 05, used to store raw materials for FURN 601, FURN 602, FURN 603, and FURN 605, respectively, and one (1) intermediate batch bin, identified as Unit ID #DB 02A, each utilizing a baghouse for particulate control, exhausting through stacks S/V ID # 0-10 through 0-15.

D.3.1 Particulate Matter (PM) [326 IAC 6-3]

Pursuant to 326 IAC 6-3 (Process Operations), the allowable PM emission rate from the eight (8) silos, one (1) batch raw material receiving bin and the five (5) day bins shall not exceed the following pounds per hour when operating at the appropriate process weight rate in tons per hour:

UNIT	Allowable Emissions (pounds per hour)
SILO 01	4.74
SILO 02	7.51
SILO 03	6.24
SILO 04	6.57
SILO 05	14.94
SILO 06	10.08
SILO 07	1.49
SILO 08	15.22
RMH02	28.99
DB 01	14.37
DB 02	17.14
DB 02A	17.14
DB 03	7.11
DB 05	5.34

The pounds per hour limitation was calculated with the following equation:

Interpolation and extrapolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and P = process weight rate in tons per hour

D.3.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and their control device.

Compliance Determination Requirements

D.3.3 Testing Requirements [326 IAC 2-7-6(1),(6)]

The Permittee is not required to test these facilities by this permit. However, IDEM may require compliance testing at any specific time when necessary to determine if the facility is in compliance. If testing is required by IDEM, compliance with the PM limit specified in Condition D.3.1 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

D.3.4 Particulate Matter (PM)

The baghouse for PM control shall be in operation at all times when the eight (8) silos, one (1) batch raw material receiving bin and the five (5) day bins are in operation and exhausting to the outside atmosphere.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.3.5 Visible Emissions Notations

(a) Daily visible emission notations of the eight (8) silos, one (1) batch raw material receiving bin and the five (5) day bins stack exhaust shall be performed during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

D.3.6 Baghouse Inspections

An inspection shall be performed each calender quarter of all bags controlling the eight (8) silos, one (1) batch raw material receiving bin and the five (5) day bins when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. All defective bags shall be replaced.

D.3.7 Broken or Failed Bag Detection

In the event that bag failure has been observed:

(a) The affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) hours of discovery of the failure and shall include a timetable for completion. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

(b) For single compartment baghouses, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.3.8 Record Keeping Requirements

(a) To document compliance with Condition D.3.4**,** the Permittee shall maintain records of daily visible emission notations of the eight (8) silos, one (1) batch raw material receiving bin and the five (5) day bins stack exhaust.

(b) To document compliance with Condition D.3.6, the Permittee shall maintain records of the results of the inspections required under Condition D.3.6 and the dates the vents are redirected.

(c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION

PART 70 OPERATING PERMIT CERTIFICATION

Source Name: Knauf Fiber Glass GmbH
Source Address: 240 Elizabeth Street, Shelbyville, IN 46176
Mailing Address: 240 Elizabeth Street, Shelbyville, IN 46176
Part 70 Permit No.: T145-6038-00001

This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this permit.

Please check what document is being certified:

9 Annual Compliance Certification Letter

9 Test Result (specify) _____

9 Report (specify) _____

9 Notification (specify) _____

9 Other (specify) _____

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Date:

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT

COMPLIANCE DATA SECTION
P.O. Box 6015
100 North Senate Avenue
Indianapolis, Indiana 46206-6015
Phone: 317-233-5674
Fax: 317-233-5967

PART 70 OPERATING PERMIT
EMERGENCY/DEVIATION OCCURRENCE REPORT

Source Name: Knauf Fiber Glass GmbH
Source Address: 240 Elizabeth Street, Shelbyville, IN 46176
Mailing Address: 240 Elizabeth Street, Shelbyville, IN 46176
Part 70 Permit No.: T145-6038-00001

This form consists of 2 pages **Page 1 of 2**

Check either No. 1 or No.2
9 1. This is an emergency as defined in 326 IAC 2-7-1(12) C The Permittee must notify the Office of Air Management (OAM), within four (**4**) business hours (1-800-451-6027 or 317-233-5674, ask for Compliance Section); and C The Permittee must submit notice in writing or by facsimile within two (**2**) days (Facsimile Number: 317-233-5967), and follow the other requirements of 326 IAC 2-7-16
9 2. This is a deviation, reportable per 326 IAC 2-7-5(3)(c) C The Permittee must submit notice in writing within ten (**10**) calendar days

If any of the following are not applicable, mark N/A

Facility/Equipment/Operation:
Control Equipment:
Permit Condition or Operation Limitation in Permit:
Description of the Emergency/Deviation:
Describe the cause of the Emergency/Deviation:

If any of the following are not applicable, mark N/A **Page 2 of 2**

Date/Time Emergency/Deviation started:
Date/Time Emergency/Deviation was corrected:
Was the facility being properly operated at the time of the emergency/deviation? Y N Describe:
Type of Pollutants Emitted: TSP, PM-10, SO_2, VOC, NO_X, CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency/deviation:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed by: _____
Title / Position: _____
Date: _____
Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION

PART 70 OPERATING PERMIT
QUARTERLY COMPLIANCE MONITORING REPORT

Source Name: Knauf Fiber Glass GmbH
Source Address: 240 Elizabeth Street, Shelbyville, IN 46176
Mailing Address: 240 Elizabeth Street, Shelbyville, IN 46176
Part 70 Permit No.: T145-6038-00001

Months: _____ to _____ Year: _____

This report is an affirmation that the source has met all the compliance monitoring requirements stated in this permit. This report shall be submitted quarterly. Any deviation from the compliance monitoring requirements and the date(s) of each deviation must be reported. Additional pages may be attached if necessary. This form can be supplemented by attaching the Emergency/Deviation Occurrence Report. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

9 NO DEVIATIONS OCCURRED THIS REPORTING PERIOD

9 THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD.

Compliance Monitoring Requirement (e.g. Permit Condition D.1.3)	**Number of Deviations**	**Date of each Deviation**

Form Completed By: _____
Title/Position: _____
Date: _____
Phone: _____

Attach a signed certification to complete this report.

Indiana Department of Environmental Management
Office of Air Management

Addendum to the
Technical Support Document (TSD) for a Part 70 Operating Permit

Source Background and Description

Source Name:	Knauf Fiber Glass GmbH
Source Location:	240 Elizabeth Street, Shelbyville, IN 46176
County:	Shelby
SIC Code:	3296
Operation Permit No.:	T145-6038-00001
Permit Reviewer:	Yvette de los Angeles/EVP

On February 19, 1999, the Office of Air Management (OAM) had a notice published in the Shelbyville News, Shelbyville, Indiana, stating that Knauf Fiber Glass GmbH had applied for a Part 70 Operating Permit for the operation of a stationary wool fiberglass insulation manufacturer. The notice also stated that OAM proposed to issue a permit for this installation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

On March 19, 1999, Knauf Fiber Glass GmbH submitted comments on the proposed Part 70 permit. The summary of the comments and corresponding responses are as follows (changes in bold or strikeout for emphasis):

Comment 1:

Condition A.2(d): IDEM should change the reference to two natural gas fired afterburners to one natural gas fired afterburners because that is the accurate configuration.

Response 1:

Condition A.2(d) shall be modified as follows:

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

(d) One (1) fiberglass manufacturing line consisting of forming, curing, and cooling sections, identified as Unit ID # MFG 602, installed in 1983, operating at a maximum heat input capacity of 40 MMBtu per hour, combusting natural gas, utilizing one (1) wet electrostatic precipitator for particulate control, and ~~two (2)~~ **one (1)** natural gas fired afterburner~~s~~ with a maximum combined heat input capacity of 30 MMBtu per hour, exhausting through one (1) stack ID #2-2;

The above change will also be modified in Facility Description in Section D.1 (Page 29 of 44)

The Permitted Emission Units and Pollution Control Equipment in the Technical Support Document (Page 1 of 13) has been revised accordingly:

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units and pollution control devices:

(d) One (1) fiberglass manufacturing line consisting of forming, curing, and cooling sections, identified as Unit ID # MFG 602, installed in 1983, operating at a maximum heat input capacity of 40 MMBtu per hour, combusting natural gas, utilizing one (1) wet electrostatic precipitator for particulate control, and ~~two (2)~~ **one (1)** natural gas fired afterburner~~s~~ with a maximum combined heat input capacity of 30 MMBtu per hour, exhausting through one (1) stack ID #2-2;

Comment 2:

Condition A.5: IDEM should add a new Condition A.5 stating that this permit supersedes all prior permits: This would be consistent with the purposes of Title V. IDEM should add the following conditions:

A.5 Prior Permit Conditions Superseded [326 IAC2]
The terms and conditions of this permit incorporate all the current applicable requirements for all emission units located at this source, and supercedes all terms and conditions in all registrations and permits, including construction permits, issued prior to the date of issuance of this permit. All terms and conditions in such registrations and permits are hereby replaced and are no longer in effect.

Response 2:

On July 28, 1998, the OAM was notified that the U.S. EPA would object to any Title V Operating Permit that superceded all previous construction permits. The U.S. EPA indicated that they believed that the authority for certain applicable requirements might expire if the construction permits that established them expired. The OAM believes that the regulatory process is best served if all affected parties are able to rely on the Title V Operating Permit to identify all applicable requirements and the means for demonstrating compliance with each requirement.

The OAM intends to continue discussions with the U.S. EPA regarding the issues related to past construction permits. However the OAM also believes that the Permit Shield condition B.14 (b) (1) & (2) establishes that the Title V permit shall be used as the primary document for determining compliance with applicable requirements established by previously issued permits. Compliance with the conditions of the permit shall be deemed in compliance with any applicable requirements as of the date of the permit issuance for all the previous permits identified by the source and the OAM during the course of this review.

No change was made as a result of this comment.

Comment 3:

Condition C.1: IDEM should delete Condition C.1 because Knauf does not have any units that would be subject to this rule. This condition should be deleted because Knauf does not have any processes with process weight rate less than 100 pounds per hour. In addition, 326 IAC 11-4 establishes particulate matter emission limits for the Knauf facility. It specifies that "[f]acilities shall be exempt from 326 IAC 6-3," and presumably is referring to facilities covered by the rule which include Knauf facilities.

Response 3:

Condition C.1 applies to insignificant activities with process weight rate less than 100 pounds per hour and those facilities not covered under 326 IAC 11-4. The source may not currently have any facilities that are subject to this condition, but future insignificant activities added to the source that would not require prior permit modification or approval from IDEM, OAM may be subject to this requirement. There will be no changes to this condition in the final permit due to this comment.

Comment 4:

Condition C.10(c): IDEM should delete Condition C.10(c) because it is not authorized by regulation and because it conflicts with the rules related to a permit shield. The rules do not require Knauf to comply with requirements that become effective during the term of the permit unless the permit is modified to incorporate those new requirements. The procedures to incorporate new or different requirements provided from 326 IAC 2-7-15(d):

(d) If, after issuance of a permit, it is determined that the permit is in nonconformance with an applicable requirement, the commissioner shall immediately take steps to reopen and revise this permit and issue a compliance order to the Permittee to ensure expeditious compliance with the applicable requirement until the permit is reissued. The permit shield shall continue in effect so long as the Permittee is in compliance with the compliance order.

Until IDEM issues a compliance order or completes a revision permit, Knauf is not required to comply with any requirement that is not in the permit.

Response 4:

Any Part 70 Permit issued by IDEM must include a condition that addresses the requirement of 326 IAC 2-7-4(c)(10)(A)(ii), which states:

"For applicable requirements that will become effective during the Part 70 permit term, a statement that the source will meet such requirements on a timely basis."

Therefore, no change was made as a result of this comment.

Comment 5:

Condition C.15: IDEM should modify Condition C.15 to acknowledge that Knauf has submitted an Emergency Reduction Plan in compliance with 326 IAC 1-5-3.

Response 5:

IDEM acknowledges the receipt of Knauf's Emergency Reduction Plan on March 19, 1999 and modifies Condition C.15 as follows:

C.15 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]

Pursuant to 326 IAC 1-5-2 (Emergency Reduction Plans; Submission):

~~(a) The Permittee shall prepare written emergency reduction plans (ERPs) consistent with safe operating procedures.~~

(a) The Permittee prepared and submitted written emergency reduction plans (ERPs) consistent with safe operating procedures on March 19, 1999.

~~(b) These ERPs shall be submitted for approval to:~~

~~Indiana Department of Environmental Management~~
~~Compliance Branch, Office of Air Management~~
~~100 North Senate Avenue, P.O. Box 6015~~
~~Indianapolis, Indiana 46206-6015~~

~~within ninety (90) days after the date of issuance of this permit.~~

~~The ERP does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).~~

(b) If the ERP is disapproved by IDEM, OAM, the Permittee shall have an additional thirty (30) days to resolve the differences and submit an approvable ERP.

~~(c) If the ERP is disapproved by IDEM, OAM, the Permittee shall have an additional thirty (30) days to resolve the differences and submit an approvable ERP.~~

(c)~~(d)~~ These ERPs shall state those actions that will be taken, when each episode level is declared, to reduce or eliminate emissions of the appropriate air pollutants.

(d)~~(e)~~ Said ERPs shall also identify the sources of air pollutants, the approximate amount of reduction of the pollutants, and a brief description of the manner in which the reduction will be achieved.

(e)~~(f)~~ Upon direct notification by IDEM, OAM that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level. [326 IAC 1-5-3]

Comment 6:

Condition C.18: IDEM should delete references that it may revoke the permit to operate the affected facility for two failed stack tests. A specific regulation defines the criteria for permit revocation. That provision states:

(a) Any permit to construct or operate granted by the commissioner may be revoked for any of the following causes:
  (1) Violation of any conditions of the permit.
  (2) Failure to disclose all the relevant facts, or misrepresentation in obtaining the permit.
  (3) Changes in regulatory requirements that mandate either a temporary or permanent reduction of discharge of contaminants. However, the amendment of appropriate sections of a permit shall not require revocation of a permit.
  (4) Noncompliance with orders issued pursuant to 326 IAC 1-5 to reduce emissions during an air pollution episode.
  (5) For any other cause which establishes in the judgement of the commissioner the fact that continuance of the permit is not consistent with the purposes of 326 IAC 2-1.

IDEM should not casually pick one circumstance (out of a myriad of possibilities) and claim that it might satisfy the criteria of the rule. That is to be determined based on specific facts of a specific case. In addition, IDEM's sentence imposes no obligation, imposes no sanction, provides no direction, and therefore is meaningless. Accordingly, it should be deleted from the permit.

Response 6:

IDEM has the authority to revoke a permit that fails a second stack test, pursuant to 326 IAC 2-7-5(6)(A)(ii), which states:

(6) Provision stating the following:
(A) The permittee must comply with all conditions of the Part 70 permit. Any Part 70 permit noncompliance constitutes a violation of the CAA and is grounds for:
(ii) Part 70 permit termination, revocation and reissuance, or modification;

Therefore, no change was made as a result of this comment.

Comment 7:

Condition D.1: IDEM should modify the facility description set out in Section D.1, Facility Operation Conditions, to indicate that the capacities are "rated capacities" not maximum capacities.

Response 7:

The Facility Description in Section D.1 shall be modified as follows:

Facility Description [326 IAC 2-7-5(15)]

(a) One (1) electrically heated glass melting furnace, identified as Unit ID # FURN 601, installed in 1978, exhausting through ID # 1-1;

(b) One (1) fiberglass manufacturing line consisting of forming, curing, and cooling sections, identified as Unit ID # MFG 601, installed in 1978, operating at a ~~maximum~~ **rated** heat input capacity of 30 million (MM) British thermal units (Btu) per hour, combusting natural gas, utilizing one (1) wet electrostatic precipitator for particulate control, and two (2) natural gas fired thermal oxidizers with a ~~maximum~~ **rated** combined heat input capacity of 36 MMBtu per hour, exhausting through one (1) stack ID #1-2;

(c) One (1) gas-fired (with electric boost) glass melting furnace, identified as Unit ID # FURN 602, installed in 1983, operating at a ~~maximum~~ **rated** heat input capacity of 30 MMBtu per hour, combusting natural gas, utilizing one (1) dry electrostatic precipitator for particulate control, exhausting through one (1) stack ID #2-1;

(d) One (1) fiberglass manufacturing line consisting of forming, curing, and cooling sections, identified as Unit ID # MFG 602, installed in 1983, operating at a ~~maximum~~ **rated** heat input capacity of 40 MMBtu per hour, combusting natural gas, utilizing one (1) wet electrostatic precipitator for particulate control, and one (1) natural gas fired afterburner with a ~~maximum~~ **rated** combined heat input capacity of 30 MMBtu per hour, exhausting through one (1) stack ID #2-2;

(e) One (1) electrically heated glass melting furnace, identified as Unit ID # FURN 603, installed in 1978, exhausting through one (1) stack ID #3-1;

(f) One (1) fiberglass manufacturing line consisting of forming section, identified as Unit ID # MFG 603, installed in 1978, operating at a ~~maximum~~ **rated** heat input capacity of 15 million (MM) British thermal units (Btu) per hour, combusting natural gas, utilizing two (2) wet scrubbers for particulate control, exhausting through one (1) stack ID #-3-2;

(g) One (1) natural gas-fired glass melting furnace, identified as Unit ID # FURN 605, installed in 1983, operating at a ~~maximum~~ **rated** heat input capacity of 10 MMBtu per hour, exhausting through one (1) stack ID #5-1; and

(h) One (1) fiberglass manufacturing line consisting of forming, curing, and cooling sections, identified as Unit ID # MFG 605, installed in 1983, operating at a ~~maximum~~ **rated** heat input capacity of 20 MMBtu per hour, combusting natural gas, exhausting through four (4) stacks ID #5-2, 5-3, 5-4, and 5-5.

The above change will also be modified in Condition A.2 (Emission Units and Pollution Control Equipment Summary) (Page 5 of 44), as well as the Permitted Emission Units and Pollution Control Equipment in the Technical Support Document (Page 1 of 13).

Comment 8:

Condition D.1.1(a): IDEM should delete Condition D.1.1(a) because the particulate emission limits for the devices are set out in Condition D.1.2. In addition, the applicable regulations specify that "the specific facilities and processes listed in 326 IAC 11-4-4 shall not emit particulate matter in excess of the limitations contained therein." (see 326 IAC 11-4-2(b)). In addition, the New Source Performance Standards apply to any new facility for which limits are not established in 326 IAC 11-4-5.

Response 8:

Since the particulate emission limits for Knauf are outlined in Condition D.1.2, Condition D.1.1(a) has been deleted.

D.1.1 Particulate Matter Emission Limitation ~~[326 IAC 11-4-2] and [326 IAC 12 (40 CFR 60.290, Subpart CC)]~~

~~(a) Pursuant to 326 IAC 11-4-2 (Fiberglass Manufacturing - Particulate matter emission limitation), the particulate matter emissions shall be limited to:~~

~~(1) 0.047 milligrams per dry standard cubic meters (dscm) (0.025 grains per dry standard cubic feet (dscf)) from forming facilities, and~~

~~(2) 0.47 milligrams per dry standard cubic meters (dscm) (0.25 grains per dry standard cubic feet (dscf)) from furnace operations.~~

~~(b)~~ Pursuant to 326 IAC 12 (40 CFR 60.290, Subpart CC) "Standard of Performance for Glass Manufacturing Plants", the particulate matter emissions from the one (1) gas-fired (with electric boost) glass melting furnace (FURN 602) shall be limited to 0.25 grams of particulate per kg of glass produced.

Comment 9:

Conditions D.1.3: IDEM should modify Conditions D.1.3 to reflect that the Preventative Maintenance Plan is required for the control devices, not for the facilities. The regulations intend preventative maintenance plans to be required for control devices. The regulations reflect this intent when describing the content of the preventative maintenance plans to include the following:

(1) Identification of the individual(s) responsible for inspecting, maintaining and repairing emission control devices.

Response 9:

Pursuant to 326 IAC 1-6-3, any person responsible for operating **any facility** specified in 326 IAC 1-6-1 shall prepare and maintain a preventative maintenance plan including the following information:

(1) Identification of the individuals responsible for inspecting, maintaining and repairing the emission control equipment (326 IAC 1-6-3(a)(1)),

(2) The description of the items or conditions that will be inspected and the inspection schedule for said items or conditions (326 IAC 1-6-3(a)(2)), and

(3) The identification and quantification of the replacement parts for the facility which the permittee will maintain in inventory for quick replacement (326 IAC 1-6-3(a)(2).

It is clear from the structure of the wording in 326 IAC 1-6-3 that the PMP requirement affects the entirety of the applicable facilities. Therefore, there will be no changes to this condition in the final permit due to this comment.

Comment 10:

Condition D.1.5: IDEM should modify Condition D.1.5 to add the phrase "except for cases of malfunction or emergency" to clarify that the control devices do not have to operate when there are cases of malfunction or emergency. The regulations do not require operation of control devices in cases of malfunction or emergency. See 326 IAC 2-7-16.

Response 10:

The provisions of 326 IAC 2-7-16 provide an affirmative defense only for "emergencies". These provisions are included in Condition B.13 of this permit and provide the opportunity establish such a defense for Condition D.1.5. Provisions in 326 IAC 2-7-16 only apply to emergency situations and not to malfunction situations. Pursuant to 326 IAC 2-7-16, Condition B.13 cites the conditions that must be met for an emergency to be considered an affirmative defense to an action brought for noncompliance with a health-based or technology-based emission limitation. The permittee must demonstrate the affirmative defense of an emergency as outlines in Condition B.13. Therefore, no change was made as a result of this comment.

Comment 11:

Condition D.1.7(b): IDEM should modify Condition D.1.7(b) to reflect that there are two precipitators, not one precipitator.

Response 11:

Condition D.1.7(b) shall be modified as follows:

D.1.7 Parametric Monitoring

(b) The Permittee shall record the total secondary voltage across **each of** the wet electrostatic precipitator**s** used in conjunction with the manufacturing lines (MFG 601 and 602), at least once daily when the manufacturing lines (MFG 601 and 602) are in operation. The Compliance Response Plan for these units shall establish the appropriate ranges and shall contain troubleshooting contingency and response steps for when the voltage reading is outside of the stated ranges for any one reading.

Comment 12:

Condition D.1.9: IDEM should modify Condition D.1.9 to indicate that Knauf should follow the compliance response plan when a failure has been observed and delete the rest of Condition D.1.9. This condition should be modified for several reasons. First, the permit should not require compartments to be shut down until the failed units have been repaired or replaced. This suggests that partially functioning compartments should be shut down. This would increase emissions. Second, the Compliance Response Plan should specify the time for actions to be taken and the content of those actions. Accordingly, the permit should merely require Knauf to follow that plan.

Response 12:

Failed wet scrubbers and/or electrostatic precipitators can have a dramatic effect on performance and few sources have reliable information that demonstrates that compliance can be achieved when units are "on line" with failed wet scrubbers and/or electrostatic precipitators. Condition D.1.5 also states that the wet scrubbers and the electrostatic precipitators shall be in operation at all times the units are in operation. If emissions are better minimized by keeping "partially failed" units on line for failed wet scrubbers and/or electrostatic precipitators, then this can be addressed in the Compliance Monitoring Plan. The condition has been revised as follows to clarify that the emergency provisions of the Title V rule and the corresponding condition in this permit may take precedence if applicable.

D.1.9 Broken **or Failed** Wet Scrubbers and/or Electrostatic Precipitators ~~or Failure~~ Detection

In the event that wet scrubbers and/or electrostatic precipitators failure has been observed.

(a) The affected ~~compartments~~ **units** will be shut down immediately until the failed units have been repaired or replaced. ~~For scrubbers, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced.~~ **Within eight (8) hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) hours of discovery of the failure and shall include a timetable for completion. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).**

(b) ~~Within eight (8) hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) hours of discovery of the failure and shall include a timetable for completion.~~ **For scrubbers and/or electrostatic precipitators, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).**

Comment 13:

Condition D.1.10(a): IDEM should modify Condition D.1.10(a) to reference Condition D.1.6, rather than Condition D.1.5, to accurately reflect the proper section.

Response 13:

Condition D.1.10(a) has been modified as follows:

D.1.10 Record Keeping Requirements

(a) To document compliance with Condition ~~D.1.5~~ **D.1.6**, the Permittee shall maintain records of daily visible emission notations of the manufacturing lines (MFG 601-605) stack exhaust.

Comment 14:

Condition D.1.10(b): IDEM should delete all portions of Condition D.1.10(b), except for Conditions D.1.10(b)(1) and (2). Maintaining records set out in Condition D.1.10(a) and (b)(1) and (2) provides sufficient assurance Knauf is maintaining compliance with its emission standards. Conditions (b)(3) through (b)(8) are burdensome and are not substantially relevant to compliance, and are poorly defined. Accordingly, IDEM should remove these requirements.

Response 14:

OAM agrees that Conditions (b)(3) through (b)(8) can be deleted as follows:

D.1.10 Record Keeping Requirements

(a) To document compliance with Condition D.1.6, the Permittee shall maintain records of daily visible emission notations of the manufacturing lines (MFG 601-605) stack exhaust.

(b) To document compliance with Condition D.1.7, the Permittee shall maintain the following:

(1) Daily records of the following operational parameters during normal operation:

(A) Daily differential static pressure; and

(B) Daily secondary voltage readings.

(2) Documentation of all response steps implemented, per event .

~~(3) Operation and preventive maintenance logs, including work purchases orders, shall be maintained.~~

~~(4) Quality Assurance/Quality Control (QA/QC) procedures.~~

~~(5) Operator standard operating procedures (SOP).~~

~~(6) Manufacturer's specifications or its equivalent.~~

~~(7) Equipment "troubleshooting" contingency plan.~~

~~(8) Documentation of the dates vents are redirected.~~

Comment 15:

Condition D.1.10(d): IDEM should modify Condition D.1.10(d) to reference Condition D.1.8, rather than Condition D.1.10, to accurately reflect the proper section.

Response 15:

Condition D.1.10(d) shall be modified as follows:

D.1.10 Record Keeping Requirements

(d) To document compliance with Condition ~~D.1.10~~ **D.1.8**, the Permittee shall maintain records of the results of the inspections required under Condition ~~D.1.10~~ **D.1.8**.

Comment 16:

Condition D.1.11: IDEM should modify Condition D.1.11 to reference Conditions D.1.6-D.1.10 to accurately reflect what the form relates to.

Response 16:

Condition D.1.11 does not refer to the Quarterly Compliance Monitoring Report. Conditions D.1.6-D.1.10 are subject to record keeping and not reporting. Conditions D.1.1 and D.1.2 are subject to reporting. Therefore, no change was made as a result of this comment.

Comment 17:

Conditions D.2.2: IDEM should modify Conditions D.2.2 to reflect that the Preventative Maintenance Plan is required for the control devices, not for the facilities. The regulations intend preventative maintenance plans to be required for control devices. The regulations reflect this intent when describing the content of the preventative maintenance plans to include the following:

(1) Identification of the individual(s) responsible for inspecting, maintaining and repairing emission control devices.

Response 17:

See Response 9. There will be no changes to this condition in the final permit due to this comment.

Comment 18:

Condition D.2.6: IDEM should delete the second section in Condition D.2.6 because the leak detector is an electronic device, not a pressure gauge.

Response 18:

Condition D.2.6 has been modified as follows:

D.2.6 Parametric Monitoring

The Permittee shall record the leak detector picoampere (pA) for each dust collector on the fiberglass trimming operation used in conjunction with the nine (9) fiberglass pipe insulation production lines, at least once daily when the nine (9) fiberglass production lines are in operation. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, leak detectors will be operated at a maximum set point of 11 pA or a range established during a stack test. The Compliance Response Plan for this unit shall contain troubleshooting

contingency and response steps for when the pA display reading is outside of the above mentioned range for any one reading.

~~The instrument used for determining the picoampere reading shall comply with Section C - Pressure Gauge Specifications, of this permit, shall be subject to approval by IDEM, OAM, and shall be calibrated at least once every six (6) months.~~

Comment 19:

Condition D.2.8: IDEM should modify Condition D.2.8 to indicate that Knauf should follow the compliance response plan when a failure has been observed and delete the rest of Condition D.2.8.

Response 19:

Failed dust collectors can have a dramatic effect on performance and few sources have reliable information that demonstrates that compliance can be achieved when units are "on line" with failed dust collectors. Condition D.2.4 also states that the dust collector shall be in operation at all times the units are in operation. The condition has been revised as follows to clarify that the emergency provisions of the Title V rule and the corresponding condition in this permit may take precedence if applicable.

D.2.8 Broken **or Failed** Dust Collectors ~~or Failure~~ Detection

In the event that dust collector failure has been observed.

(a) The affected compartments will be shut down immediately until the failed units have been repaired or replaced. ~~For dust collectors, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced.~~ **Within eight (8) hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) hours of discovery of the failure and shall include a timetable for completion. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).**

(b) ~~Within eight (8) hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) hours of discovery of the failure and shall include a timetable for completion.~~ **For dust collectors, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).**

Comment 20:

Condition D.2.9: IDEM should modify the recordkeeping requirements and reporting requirements set out in Condition D.2.9 to be consistent with the reading of picoamperes and delete the various provisions set out in D.2.9(b)(3) through (9) and D.2.9(b)(2)(A) because they are not necessary for demonstrating compliance.

Response 20:

Documents listed in conditions (b)(3) through (b)(9) and (b)(2)(A) are needed to establish the Compliance Response Plan. Conditions (b)(3) through (b)(9) has been modified as follows:

D.2.9 Record Keeping Requirements

(a) To document compliance with Condition D.2.4**,** the Permittee shall maintain records of daily visible emission notations of the nine (9) fiberglass pipe insulation production lines taken in accordance with Condition D.2.5.

(b) To document compliance with Condition D.2.6, the Permittee shall maintain the following:

(1) Daily records of picoampere readings.

(2) Daily records of the following operational parameters during normal operation:

(A) Cleaning cycle: frequency and differential pressure

(3) Documentation of all response steps implemented, per event.

(4) Operation and preventive maintenance logs, including work purchases orders, shall be maintained.

(5) Quality Assurance/Quality Control (QA/QC) procedures **or its equivalent**.

(6) Operator standard operating procedures (SOP) **or its equivalent**.

(7) Manufacturer's specifications or its equivalent.

(8) Equipment "troubleshooting" contingency plan.

(9) Documentation of the dates vents are redirected.

Comment 21:

Condition D.2.10: IDEM should modify Condition D.2.10 to reference Conditions D.2.5-D.2.8 to accurately reflect what the form relates to.

Response 21:

Condition D.2.10 does not refer to the Quarterly Compliance Monitoring Report. Conditions D.2.5-D.2.8 are subject to record keeping and not reporting. Condition D.2.1 is subject to reporting. Therefore, no change was made as a result of this comment.

Comment 22:

Condition D.3.1: IDEM should delete the controlled emissions column in Condition D.3.1 because that information is irrelevant to the standard. Condition 3.1 establishes emission limits for the various emission units in terms of process weight, allowable emissions, and controlled emissions.

Response 22:

Condition D.3.1 shall be modified as follows:

D.3.1 Particulate Matter (PM) [326 IAC 6-3]

Pursuant to 326 IAC 6-3 (Process Operations), the allowable PM emission rate from the eight (8)

silos, one (1) batch raw material receiving bin and the five (5) day bins shall not exceed the following pounds per hour when operating at the appropriate process weight rate in tons per hour:

UNIT	Allowable Emissions (pounds per hour)	~~Controlled Emissions (pounds per hour)~~
SILO 01	4.74	~~0.002~~
SILO 02	7.51	~~0.005~~
SILO 03	6.24	~~0.005~~
SILO 04	6.57	~~0.005~~
SILO 05	14.94	~~0.014~~
SILO 06	10.08	~~0.007~~
SILO 07	1.49	~~0.000~~
SILO 08	15.22	~~0.014~~
RMH02	28.99	~~0.555~~
DB 01	14.37	~~0.194~~
DB 02	17.14	~~0.253~~
DB 02A	17.14	~~0.253~~
DB 03	7.11	~~0.068~~
DB 05	5.34	~~0.046~~

The pounds per hour limitation was calculated with the following equation:

Interpolation and extrapolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

Comment 23:

Condition D.3.4: IDEM should modify Condition D.3.4 related to operating the baghouse to add a clause providing that the “except for cases of malfunction or emergency.”

Response 23:

See Response 10. There will be no changes to this condition in the final permit due to this comment.

Comment 24:

Condition D.3.6: IDEM should delete Condition D.3.6 related to Parametric Monitoring for the silos and receiving bins because the parametric monitoring makes no sense. Condition D.3.6 establishes requirements that Knauf record total static pressure drop across the baghouses for the baghouse used

in connection with the eight silos and the raw material bins. This methodology makes no sense. Only when the bins are filled, the air is exhausted due to the displacement and therefore, the static pressure drop across the baghouse doe not indicate compliance or noncompliance with the applicable regulation.

Response 24:

IDEM agreed and determined that Condition D.3.6 is not required for the way the PM emissions from silos and the raw material bins are controlled. Therefore, Condition D.3.6 has been deleted and the rest of the conditions in Section 3 have been renumbered accordingly.

~~D.3.6 Parametric Monitoring~~

~~The Permittee shall record the total static pressure drop across the baghouse used in conjunction with the eight (8) silos, one (1) batch raw material receiving bin and the five (5) day bins, at least once weekly when the eight (8) silos, one (1) batch raw material receiving bin and the five (5) day bins are in operation when venting to the atmosphere. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the baghouse shall be maintained within the range of 2.0 and 6.0 inches of water or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.~~

~~The instrument used for determining the pressure shall comply with Section C - Pressure Gauge Specifications, of this permit, shall be subject to approval by IDEM, OAM and shall be calibrated at least once every six (6) months.~~

Comment 25:

Condition D.3.7: IDEM should modify Condition D.3.7 to remove references to venting indoors because the units do not vent indoors.

Response 25:

Condition D.3.7, now Condition D.3.6, has been modified as follows:

~~D.3.7~~ **D.3.6** Baghouse Inspections

An inspection shall be performed each calender quarter of all bags controlling the eight (8) silos, one (1) batch raw material receiving bin and the five (5) day bins when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. ~~Inspections are optional when venting to the indoors.~~ All defective bags shall be replaced.

Comment 26:

Condition D.3.8: IDEM should modify Condition D.3.8 to indicate that Knauf should follow the compliance response plan when a failure has been observed and delete the rest of Condition D.3.8.

Response 26:

Torn or otherwise failed bags can have a dramatic effect on bag house performance and few sources have reliable information that demonstrates that compliance can be achieved when compartments are “on line” with torn bags. Condition D.3.4 also states that the baghouse shall be in operation at all times the units are in operation. Therefore, there is no change in the permit due to this comment.

Comment 27:

Condition D.3.9(b): IDEM should modify Condition 3.9(b) related to inspections of baghouses to

reference Condition D.3.7, not Condition D.3.6, to accurately reflect baghouse inspection provision.

Response 27:

Condition D.3.7 has now been renumbered D.3.6 and now reflects the correct condition. Therefore, there is no change due to this comment.

Comment 28:

Condition D.3.10: IDEM should modify Condition D.3.10 to reference Conditions D.3.5-D.3.8 to accurately reflect what the form relates to.

Response 28:

Condition D.3.10 does not refer to the Quarterly Compliance Monitoring Report. Conditions D.3.5-D.3.8 are subject to record keeping and not reporting. Quarterly reporting to demonstrate compliance with Condition D.3.1 is not necessary. Therefore, Condition D.3.10 will be deleted.

~~D.3.10 Reporting Requirements~~

~~A quarterly summary of the information to document compliance with Condition D.3.1 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.~~

Comment 29:

Technical Support Document, Page 13 of 13: IDEM should modify its Technical Support Document to reflect that Knauf does emit hazardous air pollutants as set forth in its application and remove the references that no hazardous air pollutants are emitted from this operation.

Response 29:

The Air Toxic Emissions, Page 13 of 13 of the Technical Support Document, should read as follows:

Air Toxic Emissions

Indiana presently requests applicants to provide information on emissions of the 187 hazardous air pollutants (HAPs) set out in the Clean Air Act Amendments of 1990. These pollutants are either carcinogenic or otherwise considered toxic and are commonly used by industries. They are listed as air toxics on the Office of Air Management (OAM) Part 70 Application Form GSD-08.

~~None of the listed air toxics will be emitted from this source.~~

This source will emit levels of HAPs greater than those which constitute a major source according to Section 112 of the 1990 Clean Air Act Amendments.

Comment 30:

IDEM should terminate Agreed Order in Cause No. A-1867, entered on May 25, 1993. Agreed Order A-

1867 required Knauf to conduct Method 9 emission readings. The permit only requires visual emission notations, and the permit concludes that such notations are sufficient to reasonably assure compliance with the applicable requirements. Agreed Order A-1867 is several years old and should be terminated. The issuance of this permit, with its compliance monitoring terms justifies its termination.

Response 30:

Knauf can request termination of the Agreed Order A-1867 from IDEM's Office of Enforcement. It cannot be terminated through this permitting process. Therefore, there is no change due to this comment.

Upon further review, the OAM has decided to make the following changes to the Part 70 Operating Permit and Technical Support Document (changes in bold or strikeout for emphasis):

Comment 1:

Condition D.1.4: IDEM and the US EPA have decided to change the frequency of PM stack testing. PM testing should be performed once every two (2) years and testing should include MFG 605 forming, curing and cooling sections.

Response 1:

Condition D.1.4 shall be modified as follows:

D.1.4 Testing Requirements [326 IAC 2-7-6(1),(6)]

During the period between 30 and 36 months after issuance of this permit, the Permittee shall perform PM testing on the facilities described under Section D.1(b), (c), (d), (e), (f), ~~and~~ (g)**, and (h)** utilizing the procedures set forth in 40 CFR 60, Appendix A, Methods 1-5 or other methods as approved by the Commissioner. This test shall be repeated at least once every ~~five (5)~~ **two (2)** years from the date of this valid compliance demonstration. In addition to these requirements, IDEM may require compliance testing when necessary to determine if the facility is in compliance.

Comment 2:

Condition D.1.2: IDEM and the US EPA have decided to require the use of the recycled glass or cullet in FURN 605 furnace, in order to achieve compliance with Condition D.1.2.

Response 2:

Condition D.1.2 has been modified as follows:

D.1.2 Emission Limitation [326 IAC 11-4-4]

Pursuant to 326 IAC 11-4-4 (Fiberglass Insulation Manufacturing - Emission Limitation), emission limitations for particulate matter have been set forth in Indiana's State Implementation Plan (SIP) as follows:

Process/Facility	Max. Hourly Emissions (lbs/hour)	Max. Yearly Emissions (tons/yr)
MFG 601 forming + oven (formerly 602 forming plus oven)	28.28	123.9
MFG 602 forming + oven (formerly 602 forming plus oven)	33.27	145.7
MFG 603 forming + oven (formerly 603 forming plus oven)	16.49	72.2
FURN 605 furnace (formerly 204 furnace)	10.00	43.8
MFG 605 forming (formerly 204 forming)	15.00	65.7
MFG 605 oven (formerly 204 oven)	8.00	35.0

The Permittee is required to use at least 50% post-consumer recycled glass in its mixed batch formulation for Furnace 605, unless the Permittee demonstrates to IDEM, OAM's satisfaction that Furnace 605 can achieve compliance with its particulate emission limit using a lesser amount of post-consumer recycled glass.

Indiana Department of Environmental Management
Office of Air Management

Technical Support Document (TSD) for a Part 70 Operating Permit

Source Background and Description

Source Name: **Knauf Fiber Glass GmbH**
Source Location: **240 Elizabeth Street, Shelbyville, IN 46176**
County: **Shelby**
SIC Code: **3296**
Operation Permit No.: **T145-6038-00001**
Permit Reviewer: **Yvette de los Angeles/EVP**

The Office of Air Management (OAM) has reviewed a Part 70 permit application from Knauf Fiber Glass GmbH relating to the operation of a stationary wool fiberglass insulation manufacturer.

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units and pollution control devices:

(a) One (1) electrically heated glass melting furnace, identified as Unit ID # FURN 601, installed in 1978, exhausting through one (1) stack ID # 1-1;

(b) One (1) fiberglass manufacturing line consisting of forming, curing, and cooling sections, identified as Unit ID # MFG 601, installed in 1978, operating at a maximum heat input capacity of 30 million (MM) British thermal units (Btu) per hour, combusting natural gas, utilizing one (1) wet electrostatic precipitator for particulate control, and two (2) natural gas fired thermal oxidizers with a maximum combined heat input capacity of 36 MMBtu per hour, exhausting through one (1) stack ID #1-2;

(c) One (1) gas-fired (with electric boost) glass melting furnace, identified as Unit ID # FURN 602, installed in 1983, operating at a maximum heat input capacity of 30 MMBtu per hour, combusting natural gas, utilizing one (1) dry electrostatic precipitator for particulate control, exhausting through one (1) stack ID #2-1;

(d) One (1) fiberglass manufacturing line consisting of forming, curing, and cooling sections, identified as Unit ID # MFG 602, installed in 1983, operating at a maximum heat input capacity of 40 MMBtu per hour, combusting natural gas, utilizing one (1) wet electrostatic precipitator for particulate control, and two (2) natural gas fired afterburners with a maximum combined heat input capacity of 30 MMBtu per hour, exhausting through one (1) stack ID #2-2;

(e) One (1) electrically heated glass melting furnace, identified as Unit ID # FURN 603, installed in 1978, exhausting through one (1) stack ID #3-1;

(f) One (1) fiberglass manufacturing line consisting of forming section, identified as Unit ID # MFG 603, installed in 1978, operating at a maximum heat input capacity of 15 million (MM) British thermal units (Btu) per hour, combusting natural gas, utilizing two (2) wet scrubbers for particulate control, exhausting through one (1) stack ID #-3-2;

(g) One (1) natural gas-fired glass melting furnace, identified as Unit ID # FURN 605, installed in 1983, operating at a maximum heat input capacity of 10 MMBtu per hour, exhausting through one (1) stack ID #5-1;

(h) One (1) fiberglass manufacturing line consisting of forming, curing, and cooling sections, identified as Unit ID # MFG 605, installed in 1983, operating at a maximum heat input capacity of 20 MMBtu per hour, combusting natural gas, exhausting through four (4) stacks ID #5-2, 5-3, 5-4, and 5-5;

(i) Nine (9) fiberglass pipe insulation production lines consisting of nine (9) natural gas fired curing ovens, identified as Unit ID # LINE 3001 - 3009, respectively, each with a maximum heat input capacity of 5 MMBtu per hour, each exhausting through two (2) stacks ID # 7-2 and 7-3, 8-2 and 8-3, 9-2 and 9-3, 10-2 and 10-3, 11-2 and 11-3, 12-2 and 12-3, 13-2 and 13-3, 14-2 and 14-3, and 16-2 and 16-3, respectively, each with a trimming process utilizing a dust collector for particulate control, each exhausting through stack ID # 7-4, 8-4, 9-4, 10-4, 11-4, 12-4, 13-4, 14-4, and 16-4, respectively; LINE 3001-3005 and 3008 each constructed in April 1996, LINE 3006-3007 each constructed in December 1994, and LINE 3009 constructed October 1997;

(j) Eight (8) storage silos, identified as Unit ID # SILO 01, SILO 02, SILO 03, SILO 04, SILO 05, SILO 06, SILO 07, and SILO 08, used to store limestone, dolomite, feldspar, borax, sand, soda ash, post consumer cullet, and a spare, respectively, each utilizing a baghouse for particulate control, each exhausting through stacks S/V ID #0-1 through 0-8, respectively; and

(k) One (1) batch raw material receiving bin, identified as Unit ID # RMH 02, four (4) day bins, identified as Unit ID # DB 01, DB 02, DB 03, and DB 05, used to store raw materials for FURN 601, FURN 602, FURN 603, and FURN 605, respectively, and one (1) intermediate batch bin, identified as Unit ID #DB 02A, each utilizing a baghouse for particulate control, exhausting through stacks S/V ID # 0-10 through 0-15.

Unpermitted Emission Units and Pollution Control Equipment Requiring ENSR

There are no unpermitted facilities operating at this source during this review process.

New Emission Units and Pollution Control Equipment Requiring ENSR

There are no new facilities to be reviewed under the ENSR process.

Insignificant Activities

The source also consists of the following insignificant activities, as defined in 326 IAC 2-7-1(21):

(a) Natural gas-fired combustion sources with heat input equal to or less than ten (10) million Btu per hour:

(b) Storage tanks with capacity less than or equal to 1,000 gallons and annual throughputs less than 12,000 gallons.

(c) Vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids.

(d) Water based adhesives that are less than or equal to 5% by volume of VOCs excluding HAPs.

(e) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment.

(f) Trimmers that do not produce fugitive emissions and that are equipped with a dust collection or trim material recovery device such as a bag filter or cyclone.

(g) Paved and unpaved roads and parking lots with public access.

(h) Equipment used to collect any material that might be released during malfunction, process upset, or spill cleanup, including catch tanks, temporary liquid separators, tanks, and fluid handling equipment.

(i) Stationary fire pumps.

(j) Filter or coalescer media changeout.

(k) Mold release agents using low volatile products (vapor pressure less than or equal to 2 kilopascals measured at 38 degrees C).

(l) Other categories with emissions below insignificant thresholds:

(1) FURN 602 ESP dust collection system with PM emission less than twenty-five (25) pounds per day;

(2) FURN 602 ESP recycle system with PM emission less than twenty-five (25) pounds per day;

(3) Emission from binder mixing system with VOC emission less than fifteen (15) pounds per day;

(4) Batch feeding to the furnace with PM emission less than twenty-five (25) pounds per day;

(5) Furnace forehearth emission with PM, VOC, NO_x, SO_x, and CO emission less than fifteen (15) pounds per day;

(6) Scrubber water recycling tanks with VOC emission less than fifteen (15) pounds per day;

(7) Backing/facing operations with VOC emission less than fifteen (15) pounds per day;

(8) Packaging operations with PM emission less than twenty-five (25) pounds per day;

(9) Admix (fiberglass trimmings) transport system with PM emission less than twenty-five (25) pounds per day;

(10) Fiberglass waste and dust handling with PM emission less than twenty-five (25) pounds per day;

(11) Blowing wool processing and packaging with PM emission less than twenty-five (25) pounds per day;

(12) Adhesive application with VOC emission less than fifteen (15) pounds per day;

(13) Fiberglass trimming with dust collector with PM emission less than twenty-five (25) pounds per day; and

(14) One (1) unloading raw material line, identified as Unit ID # RMH 01 with PM emission less than twenty-five (25) pounds per day.

Existing Approvals

The source has been operating under previous approvals including, but not limited to, the following:

(a) OP 73-05-85-0079, issued on December 10, 1981;

(b) OP 73-05-85-0080, issued on December 10, 1981;

(c) OP 73-11-85-0104, issued on April 8, 1983;

(d) OP 73-02-89-0107, issued on May 28, 1985;

(e) CP 145-2816-00001, issued on March 30, 1993;

(f) CP 145-4203-00001, issued on December 21, 1994;

(g) CP 145-5128-00001, issued on April 25, 1996;

(h) CP 145-9048-00001, issued on December 18, 1997; and

(i) Registration 145-10172-00001, issued on October 29, 1998.

All conditions from previous approvals were incorporated into this Part 70 permit.

Enforcement Issue

IDEM is aware that the FURN 605 was not in compliance with 326 IAC 11-4 (Fiberglass Insulation Manufacturing) during a stack test conducted in November 26, 1997. The source has conducted another stack test on October 30, 1998 on FURN 605 and has shown compliance with 326 IAC 11-4 (Fiberglass Insulation Manufacturing).

There are no enforcement actions pending.

Recommendation

The staff recommends to the Commissioner that the Part 70 permit be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An administratively complete Part 70 permit application for the purposes of this review was received on June 3, 1996.

A notice of completeness letter was mailed to the source on March 11, 1997.

Emission Calculations

See Appendix A of this document for detailed emissions calculations (five (5) pages).

Potential Emissions

Pursuant to 326 IAC 1-2-55, Potential Emissions are defined as "emissions of any one (1) pollutant which would be emitted from a facility, if that facility were operated without the use of pollution control equipment unless such control equipment is necessary for the facility to produce its normal product or is integral to the normal operation of the facility."

Pollutant	Potential Emissions (tons/year)
PM	greater than 250
PM-10	greater than 250
SO_2	less than 100
VOC	greater than 100; less than 250
CO	greater than 250
NO_x	greater than 100; less than 250

Note: For the purpose of determining Title V applicability for particulates, PM-10, not PM, is the regulated pollutant in consideration.

(a) The potential emissions (as defined in 326 IAC 1-2-55) of PM-10, VOC, CO and NOx are equal to or greater than 100 tons per year**.** Therefore, the source is subject to the provisions of 326 IAC 2-7.

Actual Emissions

The following table shows the actual emissions from the source. This information reflects the 1996 OAM emission data.

Pollutant	Actual Emissions (tons/year)
PM	346.7
PM-10	0.0
SO_2	2.7
VOC	47.9
CO	82.7
NO_x	101.3
HAP	0.0

Limited Potential to Emit

The table below summarizes the total potential to emit, reflecting all limits, of the significant emission units.

	Limited Potential to Emit (tons per year)						
Process/facility	* PM	* PM-10	SO_2	VOC	CO	NO_X	HAPs
MFG 601 forming + oven (formerly 602 forming plus oven)	123.9	123.9	0.9	0.0	85.4	42.7	0.0
MFG 602 forming + oven (formerly 602 forming plus oven)	145.7	145.7	1.1	0.0	111.0	55.5	0.0
MFG 603 forming + oven (formerly 603 forming plus oven)	72.2	72.2	0.3	0.0	34.2	17.1	0.0
FURN 605 furnace (formerly 204 furnace)	43.8	43.80	0.0	0.0	0.0	7.7	0.0
MFG 605 forming + oven (formerly 204 forming + 204 oven)	100.7	100.7	0.2	0.0	17.1	8.5	0.0
LINE # 3001	0.1	0.1	0.0	15.3	7.6	4.4	0.0
LINE # 3002	0.1	0.1	0.0	15.3	7.6	4.4	0.0
LINE # 3003	0.1	0.1	0.0	15.3	7.6	4.4	0.0
LINE # 3004	0.1	0.1	0.0	15.3	7.6	4.4	0.0
LINE # 3005	0.1	0.1	0.0	15.3	7.6	4.4	0.0
LINE # 3006	0.1	0.1	0.0	15.3	7.6	4.4	0.0
LINE # 3007	0.1	0.1	0.0	15.3	7.6	4.4	0.0
LINE # 3008	0.1	0.1	0.0	15.3	7.6	4.4	0.0
LINE # 3009	0.1	0.1	0.0	15.3	7.6	4.4	0.0
Total Emissions	487.2	487.2	2.5	137.7	316.1	171.1	0.0

* PM and PM-10 emissions are based on the emission limits established in 326 IAC 11-4-5 (Fiberglass Insulation Manufacturing).

County Attainment Status

The source is located in Shelby County.

Pollutant	Status
PM-10	attainment
SO_2	attainment
NO_2	attainment
Ozone	attainment
CO	attainment
Lead	attainment

(a) Volatile organic compounds (VOC) and oxides of nitrogen (NO_x) are precursors for the formation of ozone. Therefore, VOC and NO_X emissions are considered when evaluating the rule applicability relating to the ozone standards. Shelby County has been designated as attainment or unclassifiable for ozone.

Part 70 Permit Conditions

This source is subject to the requirements of 326 IAC 2-7, pursuant to which the source has to meet the following:

(a) Emission limitations and standards, including those operational requirements and limitations that assure compliance with all applicable requirements at the time of issuance of Part 70 permits.

(b) Monitoring and related record keeping requirements which assume that all reasonable information is provided to evaluate continuous compliance with the applicable requirements.

Federal Rule Applicability

(a) The two (2) electrically heated glass melting furnaces (FURN 601 and FURN 603) and one (1) natural-gas fired glass melting furnace (FURN 605) are not subject to the New Source Performance Standard, 326 IAC 12, (40 CFR 60.290, Subpart CC). The two (2) electrically heated glass melting furnaces (FURN 601 and FURN 603) are all-electric melters. The one (1) natural-gas fired glass melting furnace (FURN 605) replaced LINES 204 and 205, which were constructed in 1950, before the applicability date of June 15, 1979.

The one (1) natural gas-fired glass melting furnace (FURN 602) is subject to the New Source Performance Standard, 326 IAC 12, (40 CFR 60.290, Subpart CC). The Permittee shall not discharge into the atmosphere particulate matter (PM) in excess of 0.25 grams of particulate per kg of glass produced. FURN 602 will comply with this rule. The PM emissions for FURN 602 is 0.25 grams of particulate per kg of glass produced (see Appendix A, page 7 of 7 for detailed calculations).

(b) The four (4) manufacturing lines (MFG 601, MFG 602, MFG 603, and MFG 605) are not subject to the New Source Performance Standard, 326 IAC 12, (40 CFR 60.68, Subpart PPP). These manufacturing lines were installed in 1978 and 1983, before the applicability date of February 7, 1984.

The nine (9) fiberglass pipe insulation production lines (LINE 3001 through 3009) are subject to the New Source Performance Standard, 326 IAC 12, (40 CFR 60.68, Subpart PPP). The Permittee shall not discharge into the atmosphere any gases which contain particulate matter (PM) in excess of 5.5 kg/Mg (11.0 lb/ton) of glass pulled. This source will comply with this rule. The PM emission from each oven line is 3.0 kg/MG (6.0 lb/ton) of glass pulled (see Appendix A, page 7 of 7 for detailed calculations).

(c) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs), 40 CFR Part 63, applicable to this source.

State Rule Applicability - Entire Source

326 IAC 1-6-3 (Preventive Maintenance Plan)

The source has submitted a Preventive Maintenance Plan (PMP) on June 3, 1996. This PMP has been verified to fulfill the requirements of 326 IAC 1-6-3 (Preventive Maintenance Plan).

326 IAC 2-2 (Prevention of Significant Deterioration)

This source is subject to 326 IAC 2-2 (Prevention of Significant Deterioration) because it is one of the 28 listed source categories and at least one of the regulated attainment pollutants is emitted at a rate of 100 tons per year or greater. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD applicability is as follows:

(a) This source has applied for a PSD permit in 1978 for MFG 601 and MFG 602.

(b) MFG 603 is not subject to PSD requirements because it replaced LINES 201 and 202, which were constructed in 1950, and net allowable emission increases are less than PSD threshold.

(c) MFG 605 is not subject to PSD requirements because it replaced LINES 204 and 205, which were constructed in 1950, and net allowable emission increases are less than PSD threshold.

(d) Pursuant to Construction Permit No. CP-145-5128-00001, issued on April 25, 1996, the source does not trigger PSD applicability.

326 IAC 2-6 (Emission Reporting)

This source is subject to 326 IAC 2-6 (Emission Reporting), because it has the potential to emit more than one hundred (100) tons per year of PM-10. Pursuant to this rule, the owner/operator of the source must annually submit an emission statement for the source. The annual statement must be received by July 1 of each year and contain the minimum requirement as specified in 326 IAC 2-6-4. The submittal should cover the period defined in 326 IAC 2-6-2(8)(Emission Statement Operating Year).

326 IAC 5-1 (Opacity Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period, as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

State Rule Applicability - Individual Facilities

326 IAC 6-3-2 (Process Operations)

The particulate matter (PM) from the eight (8) storage silos (SILO 01-08), one (1) batch raw material receiving bin (RMH02), and the five (5) day bins (DB01-05) shall be limited by the following:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand

(60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10 P^{0.67}$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

UNIT	Allowable Emissions (pounds per hour)	Controlled Emissions (pounds per hour)
SILO 01	4.74	0.002
SILO 02	7.51	0.005
SILO 03	6.24	0.005
SILO 04	6.57	0.005
SILO 05	14.94	0.014
SILO 06	10.08	0.007
SILO 07	1.49	0.000
SILO 08	15.22	0.014
RMH02	28.99	0.555
DB 01	14.37	0.194
DB 02	17.14	0.253
DB 02A	17.14	0.253
DB 03	7.11	0.068
DB 05	5.34	0.046

The Process Weight Rate is confidential information.

See Appendix A, page 5, for detailed calculations.

The baghouses shall be in operation at all times when each of the eight (8) storage silos (SILO 01-08), one (1) batch raw material receiving bin (RMH02), and the five (5) day bins (DB01-05) are in operation, in order to comply with this limit.

326 IAC 8-1-6 (New Facilities; General Reduction Requirements)

Facilities existing as of January 1, 1980 and have potential VOC emissions of 25 tons per year or more and are not subject to any other 8 rules shall reduce VOC emissions using Best Available Control Technology (BACT). Each of the nine (9) fiberglass pipe insulation production lines have potential VOC emissions of less than 25 tons per year, therefore, the requirements of 326 IAC 8-1-6 (New Facilities; General Reduction Requirements) will not apply.

326 IAC 10-1-1 (Nitrogen Oxides Control in Clark and Floyd Counties)

This source is not subject to 326 IAC 10-1-1 (Nitrogen Oxides Control in Clark and Floyd Counties) because this source is not located in Clark or Floyd Counties).

326 IAC 11-4 (Fiberglass Insulation Manufacturing)

This source is subject to 326 IAC 11-4 (Fiberglass Insulation Manufacturing). This rule applies to facilities for producing fiberglass insulation existing on June 19, 1979, located in Shelby County. No person shall operate any facility so as to discharge or cause to be discharged into the atmosphere any gases unless each gases are limited to a particulate matter content of no more than 0.047 milligrams per dry standard cubic meters (dscm) (0.025 grains per dry standard cubic feet (dscf)) from forming facilities and a particulate matter content of no more than 0.47 milligrams per dry standard cubic meters (dscm) (0.25 grains per dry standard cubic feet (dscf)) from furnace operations. The PM emission limitations that have been set forth in Indiana's state implementation plan for the source as follows:

Process/Facility	Max. Hourly Emissions (lbs/hour)	Max. Yearly Emissions (tons/yr)
MFG 601 forming + oven (formerly 602 forming plus oven)	28.28	123.9
MFG 602 forming + oven (formerly 602 forming plus oven)	33.27	145.7
MFG 603 forming + oven (formerly 603 forming plus oven)	16.49	72.2
FURN 605 furnace (formerly 204 furnace)	10.00	43.8
MFG 605 forming (formerly 204 forming)	15.00	65.7
MFG 605 oven (formerly 204 oven)	8.00	35.0

This source has complied with these limits from recent stack test performed in October 1998.

Compliance Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAM, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The compliance monitoring requirements applicable to this source are as follows:

1. The fiberglass manufacturing lines (MFG 601 and MFG 602) have applicable compliance monitoring conditions as specified below:

   (a) Daily visible emissions notations of the fiberglass manufacturing lines (MFG 601 and MFG 602) shall be performed during normal daylight operations. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Compliance Response Plan for this unit shall contain troubleshooting contingency and corrective actions for when an abnormal emission is observed.

   (b) The Permittee shall record the total secondary voltage across the electrostatic precipitator controlling the manufacturing lines (MFG 601 and MFG 602), at least once daily when the manufacturing lines (MFG 601 and MFG 602) are in operation. The Compliance Response Plan for this unit shall contain troubleshooting contingency and corrective actions for when the voltage reading is outside of the range for any one reading.

These monitoring conditions are necessary because the wet electrostatic precipitator for the fiberglass manufacturing lines (MFG 601 and MFG 602) must operate properly to ensure compliance with 326 IAC 2-7 (Part 70) and 326 IAC 11-4 (Fiberglass Insulation Manufacturing).

2. The fiberglass manufacturing line (MFG 603) has applicable compliance monitoring conditions as specified below:

   (a) Daily visible emissions notations of the fiberglass manufacturing line (MFG 603) shall be performed during normal daylight operations. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Compliance Response Plan for this unit shall contain troubleshooting contingency and corrective actions for when an abnormal emission is observed.

(b) The Permittee shall record the total gas pressure drop across the wet scrubber controlling the fiberglass manufacturing line (MFG 603), at least once daily when the fiberglass manufacturing line (MFG 603) is in operation. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the wet scrubber shall be maintained at a minimum of 10 inches of water or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and corrective actions for when the pressure reading is below the above mentioned range for any one reading.

These monitoring conditions are necessary because the wet scrubber for the fiberglass manufacturing line (MFG 603) must operate properly to ensure compliance with 326 IAC 2-7 (Part 70) and 326 IAC 11-4 (Fiberglass Insulation Manufacturing).

3. The nine (9) fiberglass pipe insulation production lines (LINE 3001 through 3009) have applicable compliance monitoring conditions as specified below:

(a) Daily visible emissions notations of the nine (9) fiberglass pipe insulation production lines (LINE 3001 through 3009) shall be performed during normal daylight operations. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously “normal” means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Compliance Response Plan for this unit shall contain troubleshooting contingency and corrective actions for when an abnormal emission is observed.

(b) The Permittee shall record the leak detector picoampere (pA) across the dust collector controlling the nine (9) fiberglass pipe insulation production lines (LINE 3001 through 3009), at least once daily when the nine (9) fiberglass pipe insulation production lines (LINE 3001 through 3009) are in operation. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the leak detector picoampere (pA) across the dust collector shall be maintained at a maximum set point of 11 pA or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and corrective actions for when the picoampere display reading is above mentioned range for any one reading.

These monitoring conditions are necessary because the dust collector controlling the nine (9) fiberglass pipe insulation production lines (LINE 3001 through 3009) must operate properly to ensure compliance with 326 IAC 2-7 (Part 70) and 326 IAC 12 (New Source Performance Standard).

4. The eight (8) silos (SILO 01-08) and five (5) day bins (DB01-05) have applicable compliance monitoring conditions as specified below:

(a) Daily visible emissions notations of the eight (8) silos (SILO 01-08) and five (5) day bins (DB01-05) shall be performed during normal daylight operations. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Compliance Response Plan for this unit shall contain troubleshooting contingency and corrective actions for when an abnormal emission is observed.

These monitoring conditions are necessary because the baghouse for the eight (8) silos (SILO 01-08) and five (5) day bins (DB01-05) must operate properly to ensure compliance with 326 IAC 2-7 (Part 70) and 326 IAC 6-3 (Process Operations).

Air Toxic Emissions

Indiana presently requests applicants to provide information on emissions of the 187 hazardous air pollutants (HAPs) set out in the Clean Air Act Amendments of 1990. These pollutants are either carcinogenic or otherwise considered toxic and are commonly used by industries. They are listed as air toxics on the Office of Air Management (OAM) Part 70 Application Form GSD-08.

None of the listed air toxics will be emitted from this source.

Conclusion

The operation of this wool fiberglass insulation manufacturer shall be subject to the conditions of the attached proposed **Part 70 Permit No. T145-6038-00001.**

Appendix A: Emission Calculations

Company Name: Knauf Fiber Glass GmbH
Address City IN Zip: 240 Elizabeth Street, Shelbyville, IN 46176
CP: T145-6038
Plt ID: 145-00001
Reviewer: Yvette de los Angeles
Date: 09/14/99

Uncontrolled Potential Emissions (tons/year)

	Emissions Generating Activity						
Pollutant	* Manufacturing Lines MFG 601, 602, 603, 605	Furnaces FURN 601, 602, 603, 605	Thermal Oxidizers MFG 601, 602	9 Curing Ovens (LINES 3001-3009)	Unloading/Loading Emissions (RMH02, DB01-05)	Storage Emissions (SILO 01-08)	**TOTAL**
PM	1,467.90	1,243.22	2.20	118.26	600.58	22.43	3,454.59
PM10	1,467.90	1,243.22	2.20	118.26	600.58	22.43	3,454.59
SO2	2.48	1.73	0.17	0.00	0.00	0.00	4.38
NOx	123.84	232.86	14.45	39.42	0.00	0.00	410.57
VOC	0.00	0.00	1.59	137.97	0.00	0.00	139.56
CO	247.69	1.36	24.29	68.99	0.00	0.00	342.33
total HAPs	0.00	0.00	0.00	0.00	0.00	0.00	0.00
worst case single HAP	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Total emissions based on rated capacity at 8,760 hours/year.

* Emissions for PM and PM-10 taken from 326 IAC 11-4 (Fiberglass Insulation Manufacturing)

Controlled Potential Emissions (tons/year)

	Emissions Generating Activity						
Pollutant	* Manufacturing Lines MFG 601, 602, 603, 605	Furnaces FURN 601, 602, 603, 605	Thermal Oxidizers MFG 601, 602	9 Curing Ovens (LINES 3001-3009)	Unloading/Loading Emissions (RMH02, DB01-05)	Storage Emissions (SILO 01-08)	**TOTAL**
PM	486.30	68.11	2.20	1.18	6.01	0.22	564.02
PM10	486.30	68.11	2.20	1.18	6.01	0.22	564.02
SO2	2.48	1.73	0.17	0.00	0.00	0.00	4.38
NOx	123.84	232.86	14.45	39.42	0.00	0.00	410.57
VOC	0.00	0.00	1.59	137.97	0.00	0.00	139.56
CO	247.69	1.36	24.29	68.99	0.00	0.00	342.33
total HAPs	0.00	0.00	0.00	0.00	0.00	0.00	0.00
worst case single HAP	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Total emissions based on rated capacity at 8,760 hours/year, after control.

* Emissions for PM and PM-10 taken from 326 IAC 11-4 (Fiberglass Insulation Manufacturing)

Appendix A: Emission Calculations
Manufacturing Lines for Glass Fiber Manufacturing

Company Name: Knauf Fiber Glass GmbH
Address City IN Zip: 240 Elizabeth Street, Shelbyville, IN 46176
CP: T145-6038
Plt ID: 145-00001
Reviewer: Yvette de los Angeles
Date: 09/14/99

Process	Maximum Production ton/hr
MFG 601	
MFG 602	
MFG 603	
MFG 605	

	Pollutant					
Emission Factor in lb/ton	PM *	PM10 *	SO2	NOx	VOC	CO
Potential Emission in tons/yr						
MFG 601			0.85	42.71	NA	85.41
MFG 602			1.11	55.52	NA	111.03
MFG 603			0.34	17.08	NA	34.16
MFG 605			0.17	8.54	NA	17.08
Total Potential Emissions in ton/yr			**2.48**	**123.84**	**NA**	**247.69**

Methodology:
Emission Factors from source - diagostic gaseous emission test performed at Knauf Fiber Glass (Lynette facility) in 1995.
Potential Emission (tons/yr) = Maximum Production (tons/day) * emission factor (lb/ton) * (1 ton/2000 lb) * (8760 hours/1 year)
* PM and PM-10 emissions are taken from 326 IAC 11-4 (Fiberglass Insulation Manufacturing)

Appendix A: Emission Calculations
Electric Glass Furnaces for Glass Fiber Manufacturing

Company Name: Knauf Fiber Glass GmbH
Address City IN Zip: 240 Elizabeth Street, Shelbyville, IN 46176
CP: T145-6038
Plt ID: 145-00001
Reviewer: Yvette de los Angeles
Date: 09/14/99

Process	Maximum Production ton/hr
FURN 601	
FURN 603	

		Pollutant					
		PM	PM10	SO2	NOx	VOC	CO
Emission Factor in lb/ton							
Potential Emission in tons/yr							
	FURN 601	8.76	8.76	0.70	4.73	NA	0.88
	FURN 603	3.66	3.66	0.29	1.97	NA	0.37
Total Potential Emissions in ton/yr		**12.42**	**12.42**	**0.99**	**6.71**	**0.00**	**1.24**

Methodology:
Emission Factors from AP 42, Chapter 11.13, Tables 11.13-2, 11.13-4, 11.13-6, SCC #3-05-012-03.
Potential Emission (tons/yr) = Maximum Production (tons/day) * emission factor (lb/ton) * (1 ton/2000 lb) * (8760 hours/1 year)

Process	Maximum Production ton/hr
FURN 602	
FURN 605	

		Pollutant					
		PM	PM10	SO2	NOx	VOC	CO
Emission Factor in lb/ton	FURN 602 FURN 605						
Potential Emission in tons/yr							
	FURN 602	1186.98	1186.98	0.71	218.40	NA	0.12
	FURN 605	43.82	43.82	0.03	7.74	NA	0.00
Total Potential Emissions in ton/yr		**1230.80**	**1230.80**	**0.74**	**226.15**	**NA**	**0.12**
Pollution Control Efficiency	**99.00% (only for PM and PM-10)**						
	FURN 602	11.87	11.87				
Total Potential Emissions in ton/yr		**11.87**	**11.87**				

Methodology:
Emission Factors from source - diagostic gaseous emission test performed at Knauf Fiber Glass (Lynette facility) in 1995.
Potential Emission (tons/yr) = Maximum Production (tons/day) * emission factor (lb/ton) * (1 ton/2000 lb) * (8760 hours/1 year)
Controlled Emission (tons/yr) = Potential Emission (tons/yr) * (1 - pollution control efficiency)

Appendix A: Emission Calculations
Natural Gas Combustion
MM Btu/hr 0.3 - < 100

Company Name: Knauf Fiber Glass GmbH
Address City IN Zip: 240 Elizabeth Street, Shelbyville, IN 46176
CP: T145-6038
Plt ID: 145-00001
Reviewer: Yvette de los Angeles
Date: 09/14/99

	Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
Afterburners (2) MFG 601	36.0	315.4
Afterburners (2) MFG 602	30.0	262.8

	Pollutant					
	PM	PM10	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	7.6	7.6	0.6	50.0	5.5	84.0
Potential Emission in tons/yr						
MFG 601	1.20	1.20	0.09	7.88	0.87	13.25
MFG 602	1.00	1.00	0.08	6.57	0.72	11.04

Methodology:
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Emission Factors for NOx: uncontrolled = 100, Low Nox Burner = 50, Flue gas recirculation = 32
All PM is assumed to be less than 1.0 micrometer in diameter. Therefore, the PM emission factors may be used to estimate PM10, PM2.5, and PM1 emissions.
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission Factors from AP 42, Chapter 1.4, Tables 1.4-1 and 1.4-2, SCC #1-01-006-02, #1-02-006-02, #1-03-006-02, #1-03-006-03
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Appendix A: Emission Calculations
Curing Ovens for Glass Fiber Manufacturing

Company Name: Knauf Fiber Glass GmbH
Address City IN Zip: 240 Elizabeth Street, Shelbyville, IN 46176
CP: T145-6038
Plt ID: 145-00001
Reviewer: Yvette de los Angeles
Date: 09/14/99

Process	Maximum Production lb/hr	Maximum Production ton/hr
LINES 3001-3009		

	Pollutant					
Emission Factor in lb/ton	PM	PM10	SO2	NOx	VOC	CO
Potential Emission in tons/yr each oven	13.14	13.14	NA	4.38	15.33	7.67
Total Potential Emissions in ton/yr (for 9 curing ovens)	**118.26**	**118.26**	**NA**	**39.42**	**137.97**	**68.99**
Pollution Control Efficiency **99.00%** (only for PM and PM-10)						
Controlled Emission in tons/yr each oven	0.13	0.13	NA	4.38	15.33	7.67
Total Controlled Emission in ton/yr (for 9 curing ovens)	**1.18**	**1.18**	**0.00**	**39.42**	**137.97**	**68.99**

Methodology:
Emission Factors from AP 42, Chapter 11.13, Tables 11.13-2, 11.13-4, 11.13-6, SCC #3-05-012-09,
Potential Emission (tons/yr) = Maximum Production (tons/day) * emission factor (lb/ton) * (1 ton/2000 lb) * (8760 hours/1 year)
Controlled Emission (tons/yr) = Potential Emission (tons/yr) * (1 - pollution control efficiency)

Appendix A: Emission Calculations
Unloading/Loading for Glass Fiber Manufacturing

Company Name: Knauf Fiber Glass GmbH
Address City IN Zip: 240 Elizabeth Street, Shelbyville, IN 46176
CP: T145-6038
Plt ID: 145-00001
Reviewer: Yvette de los Angeles
Date: 09/14/99

Process	Maximum Production tons/day
RMH02	
DB01	
DB02A	
DB02	
DB03	
DB05	

		Pollutant	
Emission Factor in lb/ton of material processed		PM	PM10
Potential Emission in tons/yr			
	RMH02	243.45	243.45
	DB01	85.42	85.42
	DB02A	111.15	111.15
	DB02	111.15	111.15
	DB03	29.90	29.90
	DB05	19.51	19.51
Total Potential Emissions in ton/yr		**600.58**	**600.58**
Pollution Control Efficiency	**99.00%**		
Controlled Emission in tons/yr			
	RMH02	2.43	2.43
	DB01	0.85	0.85
	DB02A	1.11	1.11
	DB02	1.11	1.11
	DB03	0.30	0.30
	DB05	0.20	0.20
Total Controlled Emissions in ton/yr		**6.01**	**6.01**

Methodology:
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Emission Factors from AP 42, Chapter 11.13, Tables 11.13-2, SCC #3-05-012-21
Potential Emission (tons/yr) = Maximum Production (tons/day) * emission factor (lb/ton) * (1 ton/2000 lb) * (1 day/24 hours) * (8760 hours/1 year)
Controlled Emission (tons/yr) = Potential Emissions (tons/yr) * (1 - pollution control efficiency)

Appendix A: Emission Calculations
Storage for Glass Fiber Manufacturing

Company Name: Knauf Fiber Glass GmbH
Address City IN Zip: 240 Elizabeth Street, Shelbyville, IN 46176
CP: T145-6038
Plt ID: 145-00001
Reviewer: Yvette de los Angeles
Date: 09/14/99

Process	Maximum Production tons/day
SILO 01	
SILO 02	
SILO 03	
SILO 04	
SILO 05	
SILO 06	
SILO 07	
SILO 08	

		Pollutant	
Emission Factor in lb/ton of material processed		PM	PM10
Potential Emission in tons/yr			
	SILO 01	1.08	1.08
	SILO 02	2.16	2.16
	SILO 03	1.64	1.64
	SILO 04	1.77	1.77
	SILO 05	6.03	6.03
	SILO 06	3.36	3.36
	SILO 07	0.19	0.19
	SILO 08	6.21	6.21
Total Potential Emissions in ton/yr		**22.43**	**22.43**
Pollution Control Efficiency	**99.00%**		
Controlled Emission in tons/yr			
	SILO 01	0.01	0.01
	SILO 02	0.02	0.02
	SILO 03	0.02	0.02
	SILO 04	0.02	0.02
	SILO 05	0.06	0.06
	SILO 06	0.03	0.03
	SILO 07	0.00	0.00
	SILO 08	0.06	0.06
Total Controlled Emissions in ton/yr		**0.22**	**0.22**

Methodology:
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Emission Factors from AP 42, Chapter 11.13, Tables 11.13-2, SCC #3-05-012-22
Potential Emission (tons/yr) = Maximum Production (tons/day) * emission factor (lb/ton) * (1 ton/2000 lb) * (1 day/24 hours) * (8760 hours/1 year)
Controlled Emission (tons/yr) = Potential Emissions (tons/yr)) * (1 - pollution control efficiency)

MISCELLANEOUS

Compliance with 326 IAC 12 (40 CFR 60.290, Subpart CC)

The following calculations demonstrates compliance with the allowable PM emission limit of 0.25 grams of particulate per kg of glass produced.

FOR FURN 602

PM emission 11.86 tons/yr

PM emission 0.25 g/kg WILL COMPLY

Methodology:

PM emissions = (PM emission (tons/yr) * (9.07*10^5 g/ton) / Molten glass produced (max.) (kg/day) * (1yr/365 days)

Compliance with 326 IAC 12 (40 CFR 60.68, Subpart PPP)

The following calculations demonstrates compliance with the allowable PM emission limit of 5.5 kg of particulate per Mg of glass produced (11.0 pounds per ton).

FOR LINES 3001-3009 (each oven)

PM emission 13.14 tons/yr

PM emission (each oven) 3.00 kg/MG WILL COMPLY
6.00 lb/ton
PM emission (total oven) 26.99 kg/MG
53.99 lb/ton

Methodology:

PM emissions = (PM emission (tons/yr) * Cured fiberglass produced (max.) (lbs/hr) * (1yr/8760 hours)

Compliance with 326 IAC 6-3-2 (Process Operation)

The following calculation computes the allowable PM emission limit for the 8 silos (SILO 01-08), 1 batch raw material receiving bin (RMH 02), and the 5 day bins (DB01-05).

E = 4.10 * P^0.67

E = rate of emission in pounds per hour
P = process weight rate in tons per hour

Unit ID	Process Weight (ton/hr)	Allowable Emissions (lb/hr)	Controlled Emissions (ton/yr)	Controlled Emissions (lb/hr)
SILO 01		4.74	0.01	0.002
SILO 02		7.51	0.02	0.005
SILO 03		6.24	0.02	0.005
SILO 04		6.57	0.02	0.005
SILO 05		14.94	0.06	0.014
SILO 06		10.08	0.03	0.007
SILO 07		1.49	0.00	0.000
SILO 08		15.22	0.06	0.014
RMH 02		28.99	2.43	0.555
DB 01		14.37	0.85	0.194
DB 02A		17.14	1.11	0.253
DB 02		17.14	1.11	0.253
DB 03		7.11	0.30	0.068
BD 05		5.34	0.20	0.046